

The spiders (Araneae) of Rapa Nui (Easter Island)

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Abstract

A checklist is given of the spider fauna of Easter island (Rapa Nui) resulting from the sampling campaigns of the authors, together with the results of a few other samplings. The 36 species mentioned are all anthropochorous and must have been introduced by man since they first arrived on the island and more especially during the frequent visits over the last decades. The only exception is the endemic species *Tetragnatha paschae* Berland, 1924, not recorded again since 1924 and which may be now extinct. The origin of each species is given. Distribution maps are given for the 26 species found during our extensive sampling campaign of 1993. The detailed sampling records are given for each species.

Key words: Araneae, Easter island, Distribution

Résumé

La liste des araignées de l'île de Pâques (Rapa Nui) est donnée à partir des résultats obtenus par les auteurs lors de leur expédition et complétée avec les résultats de quelques autres échantillonnages. Les 36 espèces citées sont toutes synanthropiques qui auraient été apportées par l'homme lors de sa première arrivée, mais avec certitude lors de sa visite fréquente durant la dernière décennie. Une exception est l'espèce endémique *Tetragnatha paschae* Berland, 1924, plus trouvée depuis 1924 et qui pourrait être éteinte aujourd'hui. L'origine des espèces est donnée. La distribution des 26 espèces trouvées lors de la dernière longue campagne d'échantillonnage en 1993 est visualisée sur des cartes de répartition.

Mots-clefs: Araneae, île de Pâques, Distribution

Introduction

The remote 3 million years old (GONZALEZ-FERRAN, 1987) volcanic Easter Island or Rapa Nui is situated some 3700 km west of the Chilean coast at 27°09'S and 109°23'W. The nearest Polynesian island group of the Pitcairns lies some 2200 km to the west.

Since the arrival of man ca 500 AD, the vegetation of this small (165.8 km^2) island has been strongly affected and

totally altered. Most of its surface is now covered by grassland, where horses and cows run free, and by a few small to large *Eucalyptus globosus* plantations (northern flank of Rano Kao, neighbourhood of Vaitea and summit crater of Poike). The whole island is scattered with lava rocks of different sizes, mostly as the result of ancient volcanic activity but also as a result of the "civil" war that occurred between 1834 and 1866, during which the walls (erected with those lava rocks) bordering the territories of the several clans were destroyed together with the overthrow of the *moai*-statues. A more detailed description of the geological origin of the island, its climate and landscape structure is given in DESENDER & BAERT (1996).

The only paper dealing with Easter Island spiders dates from 1924. In that paper BERLAND gave the results from the identification of the spider material caught by M. BÄCKSTRÖM, a member of the SKOTTSBERG Swedish 1916-17 expedition. Nine species were cited of which one was described as endemic.

In 1993 the first and third author had the opportunity to join a Belgian scientific diving expedition "DIS RAPA NUI 270". The second author visited and collected on the island in 1988.

Material and methods

All different habitat types (natural, as well as inside houses and in cultivated areas) of the island were intensively sampled in 1993 during about three weeks (30 November to 20 December) by means of different sampling methods such as pitfall trapping, hand collecting, sweepnet and night captures using a UV light. Sixty six localities were sampled. Their description is given in Table 1 (cfr. DESENDER & BAERT, 1996) and their location is represented in Fig. 1.

In 1988 all the different habitat types except houses and cultivated habitats were also sampled by the second author. The same methods were used, but special attention was given to minute species in the litter by means of sifting and Berlese funnel extraction. Sixteen

Sector	Nr	ALT (m)	LOCALITY NAME	SHORT DESCRIPTION	SAMPLING METHOD
A	1	1	Hanga Nui	lava beach with <i>Ipomoea</i> sp.	HC
A	2	5	Hanga Nui	grass pampa, under stones	HC
A	3	5	Motu Ariki	grass pampa, under stones	HC
A	4	65		pampa with 70% grass cover	HC/PF
A	5	150	Cape O'Higgins	pampa 1 km east of Maunga Parehe	HC
A	6	170	Maunga Parehe	pampa	HC
A	7	190	Cape Roggeveen	edge of <i>Eucalyptus</i> -woodland (Figure 2)	HC
A	8	200		pampa with 60% grass cover	HC/PF
A	9	235	Cape Cumming	pampa	HC
A	10	265	Maunga Vai Havea	pampa, white hill	HC
A	11	375		SW crater rim, pampa with 100% grass cover, wind protected area	HC/PF
A	12	375		crater floor, small <i>Eucalyptus</i> -woodland with some ferns	HC/PF
A	13	380		NE crater rim, pampa with 75 % cover of grasses and small herbs	HC/PF
B	14	35	Vinapu, Ahu Tahira	pampa, under stones and between grasses	HC
B	15	200		<i>Eucalyptus</i> -woodland with well developed litter layer	PF
B	16	200		pampa with 50% of vegetation cover of grasses and small shrubs	PF
B	17	300	Orongo	pampa with nearly 100% grass cover	HC
B	18	300	Vai a Tare	E of Rano Kao crater, pampa with dense vegetation of grasses and herbs, numerous lava stones (Figure 4)	HC
B	19	300		W crater rim, pampa with 95% grass cover, 5% small shrubs (<i>Aguyava</i> sp.)	PF
B	20	305	Kari-Kari	E of crater, <i>Juniperus</i> -plantation	HC
B	21	200		inside crater rim, 95% of grasses, between rocks	PF
B	22	130		crater floor, mixed dense secundary woodland	PF
B	23	125		crater floor, secundary woodland, edge of crater lake	PF
C	24	50		surroundings of Casa Guardia Parque with few big trees	HC
C	25	65		edge zone of crater lake (dense <i>Polygonum</i> -vegetation)	PF
C	26	65		gradient near E edge of crater lake, pampa with 100% cover of grasses	PF
C	27	70		E crater rim, very dry with 80% grass cover	PF
C	28	75		S inner crater rim, 100% grass cover	LT
C	29	100		near, at the basis and on statues in crevices and cavities, S inner crater rim	HC/PF/LT

Table 1. – (continued).

Sector	Nr	ALT (m)	LOCALITY NAME	SHORT DESCRIPTION	SAMPLING METHOD
D	30	130		'encañada' at 11.5 km of Hanga Roa, pampa vegetation	HC
D	31	170		grassland with lava stones	HC
D	32	175	Vaitea	<i>Eucalyptus</i> -woodland	HC
D	33	185	Vaitea	<i>Eucalyptus</i> -woodland	PF
D	34	210		'encañada' at 11.5 km of Hanga Roa, pampa vegetation	HC
D	35	300	N of Maunga te Honga	pampa with grass tussocks and lichens, recently burned area	HC
D	36	370		edge of small waterbody with tall grasses and <i>Polygonum</i> -vegetation	HC/PF
D	37	380		pampa near site 36, 100% cover of grasses	PF
D	38	425	Rano Aroi	edge of crater swamp with <i>Scirpus riparius</i> , <i>Polygonum</i> -vegetation and grasses (Figure 1)	HC/PF
D	39	445	Maunga Terevaka	subtop, pampa with 20% grasses, 75% lichens	HC/PF
D	40	450	Maunga Terevaka	edge of <i>Eucalyptus</i> -plantation near Rano Aroi, 95% cover of mosses	PF
D	41	490	Maunga Terevaka	top zone, pampa	HC/PF
E	42	1	Ovahe	small sandy beach	HC
E	43	5	Hanga o Miti	pampa, under stones	HC
E	44	5	Anakena	sand dunes with grass tussocks (Figure 5)	PF
E	45	10	Anakena	tall grasses, regularly burned	PF
E	46	15	Anakena	NW of Maunga Puha, shortgrazed pampa on rocky soil	PF
E	47	15		W of Anakena, pampa with numerous stones	HC
E	48	20	Maunga Puha	basis of Maunga; shortgrazed.vegetation with stones	HC
E	49	20	Te Pito Kura	shortgrazed, with bigger stones (Figure 6)	HC
E	50	45		1.5 km W of Anakena; grassland with numerous stones	HC
F	51	1	Vaihu Hanga Tee	litoral zone, between stones	HC
F	52	5	Vaihu Hanga Tee	shortgrazed pampa	HC
F	53	10	Cape Eu, Ahu o Pipiri	pampa, under stones	HC
F	54	15	Hanga Tuu Hata	shortgrazed pampa with small herbs and 80% grasses	PF
F	55	40	Maunga te Miro Oone	S basis of Maunga; mainly covered with stones and rocks	HC

Table 1. – (continued).

SECTOR	Nr.	ALT (m)	LOCALITY NAME	SHORT DESCRIPTION	SAMPLING METHOD
G	56	5	Puerto	surroundings of small house	HC
G	57	5	O Orongo	N of port, under stones and between grasses	HC
G	58	20	Ana Kai Tangata	shortgrazed grassland along the coast	HC
G	59	40	Residencial Gomero	culture zone, garden with open grassland (60% cover)	HC/PF/LT
G	60	40	Residencial Gomero	garden with banana-trees	HC/PF
G	61	40	Residencial Gomero	samples taken inside house and barn	HC
G	62	75	Ahu te Pehu	grassland, collecting under stones	HC
G	63	100	Ana te Pahu	cave entrances (lava tubes)	HC
G	64	130	Ahu Akivi	grassland with small shrubs of <i>Aguyava</i>	HC
G	65	135		1 km N of Te Pehu; pampa with numerous stones	HC
G	66	140	Puna Pau	continuous (100%) shortgrazed pampa	HC

Table 1. – Short description of sites sampled for invertebrates on Easter Island between 30.11.1993 and 21.12.1993; sectors: A = Poike peninsula, B = Rano Kao, C = Rano Raraku, D = Maunga Terevaka, E = northern coast, F = southern coast, G = Hanga Roa and surroundings; numbers (second column) refer to Figure 1 (upper map); ALT = altitude; sampling methods: HC = handcollecting (includes sweepnetting in the case of taller vegetation), PF = pitfall trapping, LT = light trapping

localities were sampled and their location is represented in Fig. 2.

In this paper are also included: the sampling data of various previous collecting trips made by (1) the French-Belgian "Mercator" expedition in 1934/35; (2) S. JACQUEMART of the "Institut royal des Sciences Naturelles de Belgique" (Belgium) in 1976; (3) Paolo BRIGNOLI of the Università di l'Aquila (Italy) in 1982 and (4) Henri DUMONT and his group from the University of Ghent (Belgium) in 1990. The description of the sampling sites of BRIGNOLI, LEHTINEN and DUMONT is given in Table 3, those of the sampling sites (Fig. 1) of JACQUEMART in Table 2 (after DESENDER & BAERT, 1996).

Checklist and distribution of the Eastern Island spider species

The 36 species from Easter Island, identified or confirmed, are listed in Table 4. The taxonomy and nomenclature of the species is based upon recent research by the second author. Species, which have been transferred to new genera through recent, as yet unpublished revisions by LEHTINEN are listed with the generic names in quotation marks. In other species, combinations accepted by the authors have been used. The specific names

and combinations are not always those most frequently used, but are based on revisional work rather than frequency of use. A new combination is listed for *Oonopinus minutissimus* Petrunkevitch, 1929, *Gamasomorpha silhouettei* Benoit, 1979 and *Theridion acoreensis* Berland, 1932.

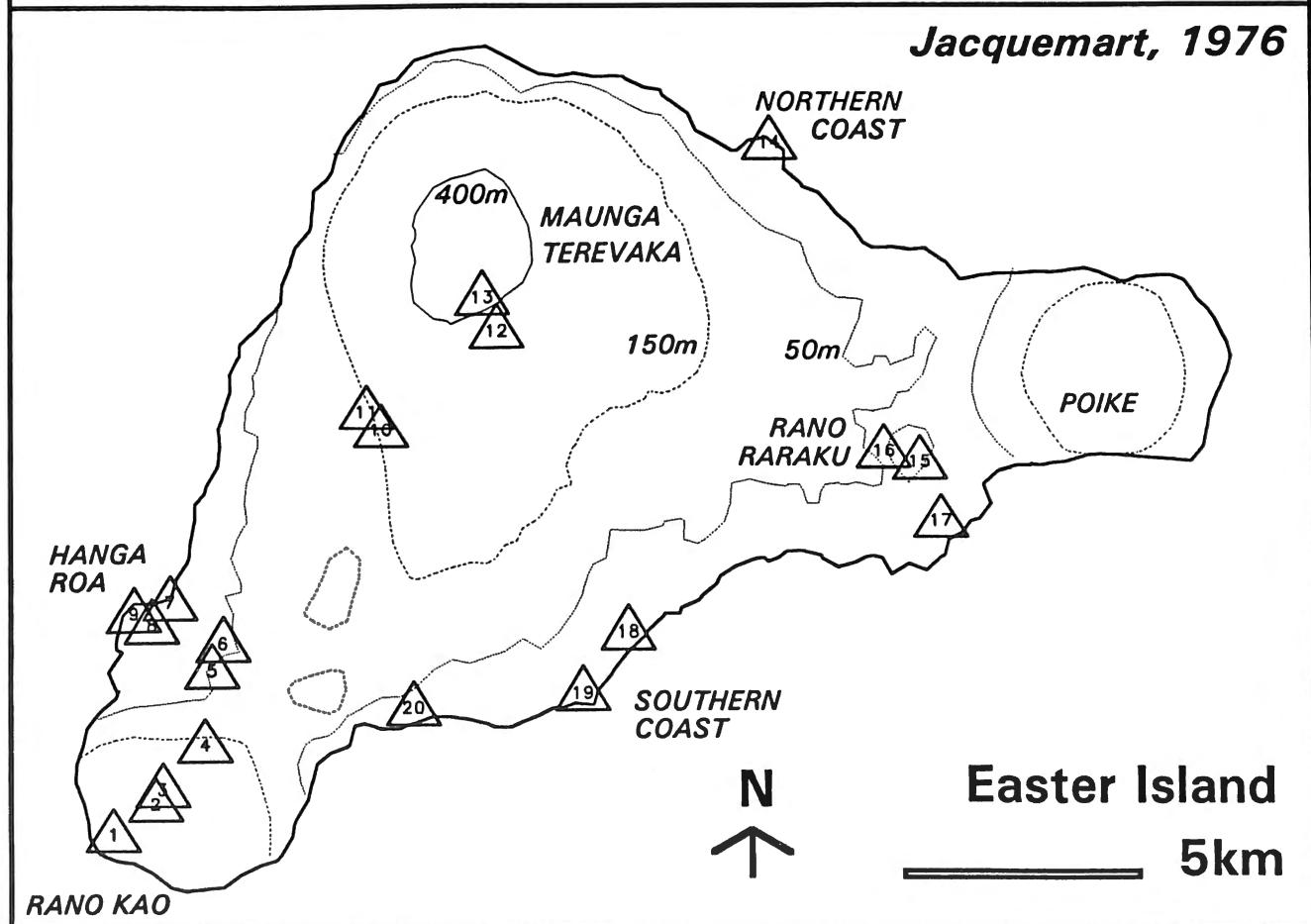
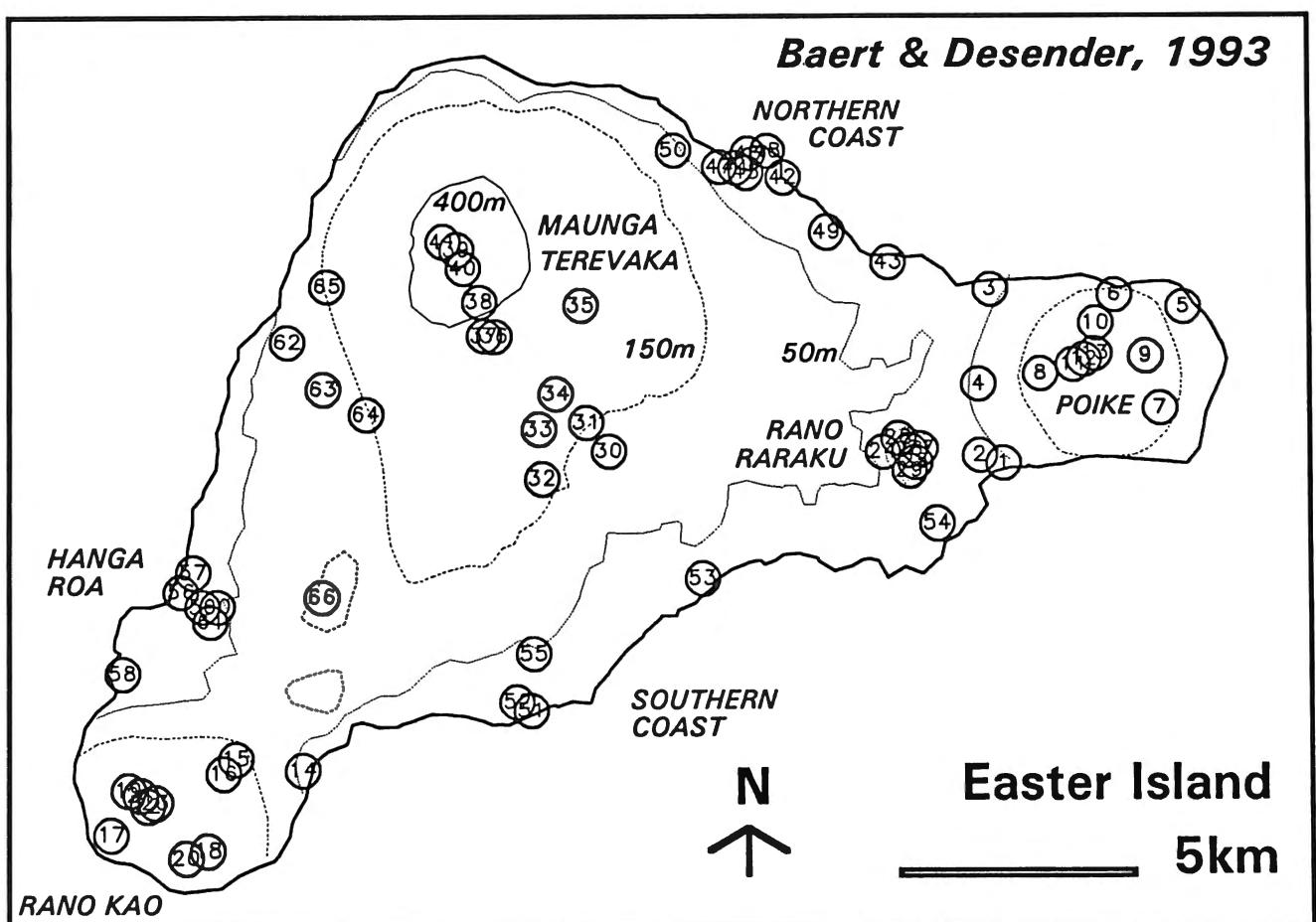
The only spider species described from a female specimen from Easter Island, *Tetragnatha paschae* Berland, 1924, has not been recorded again but most probably represents a distinct endemic species. Female *Tetragnatha spp.* are not easily placed according to description and therefore we are not able to confirm its possible synonymy with the only species of this genus in our material.

Table 4 gives also the species which were caught during the different considered collecting trips.

The distribution of the 26 species (numbers 1 to 26 between brackets behind the species name) caught during the collecting trips of BAERT & DESENDER (full circles),



Fig. 1. – Sampling sites on Easter Island: upper figure: Baert & Desender, 1993-expedition; lower figure: Jacquemart, 1976-expedition (See Table 1 and 2 for further details on the sampling sites).



Sector	Nr	ALT (m)	LOCALITY NAME	SHORT DESCRIPTION	SAMPLING METHOD
B	1	300	Orongo	along walls and under stones	HC
B	2	125	Rano Kao crater	along lake border	HC
B	3	125	Rano Kao crater	in <i>Melia</i> -wood and <i>Polygonum</i> -zone	HC
B	4	300	Rano Kao	along the road to Orongo, under stones	HC
G	5	50	Mataveri	in garden and in <i>Aguyava</i> stand	HC
G	6	50	Mataveri	surroundings of houses, <i>Aguyava</i> shrubs	HC
G	7	20	Mataveri	grassland near Ahu Mamara Nui	HC
G	8	5	Mataveri	litoral zone, along drift-line	HC
G	9	10	Mataveri	grassland near Ahu Makere	HC
D	10	150	a few km from Ahu Akivi	small <i>Melia</i> -wood under stones	HC
D	11	150	Ahu Akivi	grassland , under stones	HC
D	12	370	Maunga Terevaka	edge of small waterbody with tall grasses and <i>Polygonum</i> -vegetation	HC
D	13	425	Rano Aroi	in <i>Scirpus riparius</i> and <i>Polygonum</i> -vegetation and in nearby <i>Eucalyptus</i> -plantation	HC
E	14	20	near Maunga Puha	grassland	HC
C	15	65	Rano Raraku	along crater lake, in <i>Scirpus riparius</i> and <i>Polygonum</i> -vegetation and between <i>Spirobolus</i> -tussocks	HC
C	16	50	western slope of Rano Raraku	near Casa Guardia Parque	HC
F	17	10	Ahu Onemahiki	short grassland	HC
F	18	10	Ahu Moe O Pope	short grassland	HC
F	19	10	Ahu Tarakui	short grassland	HC
F	20	10	Ahu Temanga	short grassland	HC

Table 2. – Short description of sites sampled for invertebrates on Easter Island by S. Jacquemart (February 1976); sectors: A = Poike peninsula, B = Rano Kao, C = Rano Raraku, D = Maunga Terevaka, E = northern coast, F = southern coast, G = Hanga Roa and surroundings; numbers (second column) refer to Figure 1 (lower map); see legend Table 1 for further explanation.

JACQUEMART (full triangles) and LEHTINEN (full squares) are given in Figs. 3-9. The number (n=) refers to the number of specimens caught during the most recent expedition (1993).

Fig. 2. – Sampling sites on Easter Island of the Lehtinen 1988-expedition.

Collecting sites of the 1982 expedition (Paolo Brignoli)

- 1: Along road from Hanga Paukura towards Anakena, 14 Nov '82.
- 2: Along road from Ahu Akivi towards Orongo (Rano Kao), 13-15 Nov '82.

Collecting sites of the 1988 expedition (Pekka T. Lehtinen)

- 1: Hanga Roa, stone bed on grassland, 7 May '88.
- 2: Hanga Roa, litter of secondary forest, 7 May '88.
- 3: Hanga Roa, in vegetation, 7 May '88.
- 4: Hanga Roa, on ground in grass, 7 May '88.
- 5: Anakena, stones on thick grass, 8 May '88.
- 6: Rano Raraku, under bark of *Eucalyptus globulus*, 8 May '88.
- 7: Rano Raraku, crater lake, grass and *Scirpus*, 9 May '88.
- 8: Motu Roa, under stones at seashore, 8 May '88.
- 9: Hua Reva, under stones at seashore, 8 May '88.
- 10: Playa de Ovalu, litter of *Eucalyptus globulus*, 8 May '88.
- 11: Maunga Vai Ohao, litter of *Eucalyptus globulus* plantation, 10 May '88.
- 12: Maunga Terevaka, Akin, under stones, 9 May '88.
- 13: Playa de Ovahe, under stones and grass tussocks, 8 May '88.
- 14: Vinapu, under stones in grassy slope, 10 May '88.
- 15: Rano Kao, grass and litter of *Psidium guajava* at the crater margin, 10 May '88.
- 16: Orongo, walls of a house, 10 May '88.

Collecting sites with spiders of the 1990 expedition (Henri Dumont)

- 1: Hanga Roa, Villa Tiki, alt. 40m, Aug '90.
- 2: Haringa Vai Ohao, *Eucalyptus globulus* wood, alt. 120 m, 16 Aug '90.
- 3: Maunga Terevaka, 'encañada' along eastern slope, alt. 270 m, 21 Aug '90.

Table 3. – Collecting sites in 1982, 1988 and 1990.

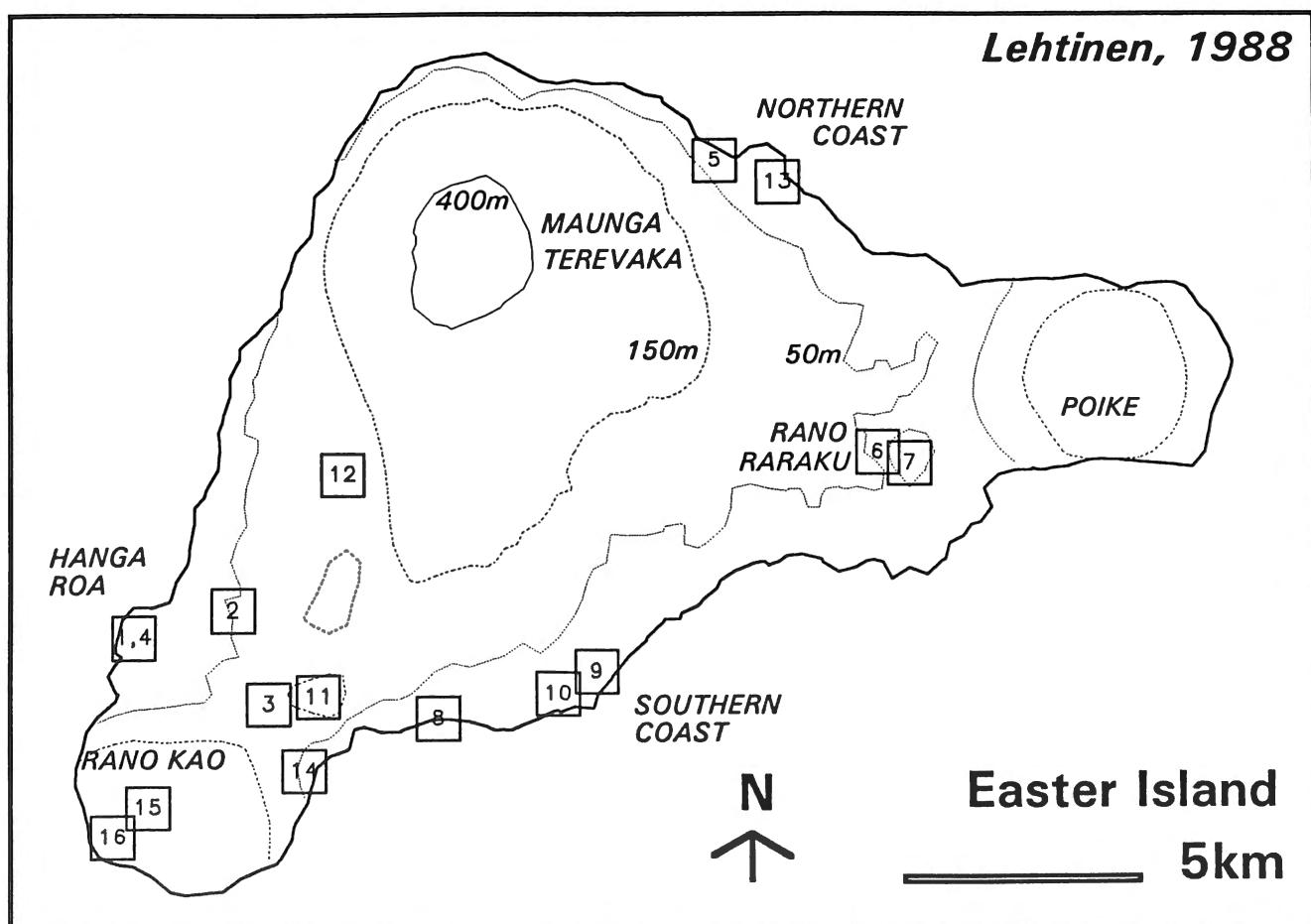


Table 4. – Checklist of Easter island spiders

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Oonopidae							
<i>Orchestininae gen.n., sp. n.</i>					x		
<i>Gamasomorpha loricata</i> (L. Koch, 1873)(1)					x		
<i>Opopaea silhouettei</i> (Benoit, 1979) n.comb.		x		x	x		x
Scytodidae							
“ <i>Scytodes</i> ” <i>longipes</i> (Lucas, 1845)(2)				x	x		x
<i>Dictis striatipes</i> L. Koch, 1872 (3)	x		x	x	x		x
Loxoscelidae							
“ <i>Loxosceles</i> ” <i>laeta</i> (Nicolet, 1849)		x			x		
Ochyroceratidae						x	
<i>Theotima minutissima</i> (Petrunkevitch, 1929) n.comb.						x	
Pholcidae							
<i>Holocneminus piritarsis</i> Berland, 1942					x		
<i>Pholcus phalangioides</i> (Fuesslin, 1775)	x	x			x		
<i>Smeringopus pallidus</i> (Blackwall, 1858)(4)				x	x	x	x
Oecobiidae							
<i>Thalamia nava</i> (Blackwall, 1859)(5)			x		x		x
Agelenidae							
<i>Tegenaria domestica</i> (Clerck, 1757)(6)		x	x	x		x	x
Anyphaenidae						x	
“ <i>Gayenna</i> ” <i>maculatipes</i> (Keyserling, 1878)(7)						x	x
Corinnidae							
<i>Creugas gulosus</i> Thorell, 1878 (8)	x			x	x		x
<i>Meriola arcifera</i> (Simon, 1886)(9)		x	x	x	x		x
Gnaphosidae							
<i>Odontodrassus javanus</i> (Kulczynski, 1911)(10)					x		x
<i>Urozelotes rusticus</i> (L. Koch, 1872)		x					
Salticidae							
<i>Dendryphantes mordax</i> (C.L. Koch, 1846)(11)							x
<i>Habronattus coecatus</i> (hentz, 1846)(12)				x			x
<i>Hasarius adansoni</i> (Savigny & Audouin, 1827)(13)	x		x	x	x	x	x
<i>Plexippus paykulli</i> (Audouin, 1827)(15)	x		x		x		x
<i>Phidippus regius</i> C.L. Koch, 1846 (14)				x			x
<i>Menemerus bivittatus</i> (Dufour, 1831)(16)					x		x
Tetragnathidae							
<i>Tetragnatha nitens</i> (Audouin, 1825)(17)	x		x				x
<i>Tetragnatha paschae</i> Berland, 1924	x						
Linyphiidae							x
<i>Tenuiphantes tenuis</i> (Blackwall, 1852)(18)							x
Erigonidae							
<i>Ostearius melanopygus</i> (O.P.-Cambridge, 1879)(19)				x			x
Areaneidae							
? <i>Zygiella</i> sp.					x		
Theridiidae							
<i>Coleosoma floridana</i> (Banks, 1900)(20)				x	x		x
“ <i>Coleosoma</i> ” <i>adamsoni</i> (Berland, 1934)		x	x	x	x		
<i>Latrodectus geometricus</i> C.L. Koch, 1841 (21)				x	x		x
<i>Nesticodes rufipes</i> (Lucas, 1846)(22)					x		x
<i>Parasteatoda acoreensis</i> (Berland, 1932)?n.comb.(23)			x				x
<i>Parasteatoda tepidarioria</i> (C.L. Koch, 1841)(24)	x	x	x	x	x	x	x
<i>Stearodea grossa</i> (C.L. Koch, 1838)(25)			x	x	x	x	x
“ <i>Theridion</i> ” <i>buxtoni</i> Berland, 1929 (26)				x			x

(1): BÄCKSTRÖM, Swedish expedition 1916-17 (BERLAND, 1924); (2): Mission Franco-Belge, Mercator 1934/35; (3): JACQUEMART (1976); (4): BRIGNOLI et al. (1982); (5): LEHTINEN (1988); (6): DUMONT et al. (1990); (7): BAERT & DESENDER, Belgian DIS RAPA NUI 270 expedition (1993).

Origin of the spider species

The species can be grouped according to their origin being either European, African, Neotropical, American or Pacific. However, the origin of the species does not mean that the species has dispersed to Easter Island from there. A number of cosmopolitan, pantropical and widespread species have an uncertain origin.

* Species with an **European** origin, being synanthropic in other regions of the world.

- *Pholcus phalangioides* and
- *Tegenaria domestica*, both typical house spiders in Europe;
- *Thalamia nava*: living mainly in the Mediterranean region;

* Species with an **European** origin, but dispersed to Easter Island from South America or New Zealand.

- *Steatoda grossa*: also living in New Zealand and continental Chili;
- *Tenuiphantes tenuis*: absent elsewhere in Polynesia, except Austral Islands.

* Species with a possible **African** origin, pantropical.

- *Smeringopus pallidus*;
- *Menemerus bivittatus*.

* Species having a **Neotropical** origin.

- “*Scytodes*” *longipes*, pantropical;
- “*Loxosceles*” *laeta*, synanthropic outside the South American deserts;
- *Theotima minutissima*, a parthenogenetic pantropical species;
- “*Gayenna maculatipes*”, widespread in southern South America;
- *Meriola arcifera*, synanthropic South American species, also on the Tuamotus;
- *Dendryphantes mordax*, quite sporadic;
- *Ostearius melanopygius*, cosmopolitan species with possible neotropical origin.

* Species with an **American** origin.

- *Phidippus regius* and
- *Habronattus coecatus*, common in the southeastern United States. In the eastern USA it is very common in disturbed areas, lawns and cultivations, and might be easily transported (p. c. Ch. GRISWOLD).

* Species with a **Pacific** origin.

Polynesian:

- *Orchestininae* n.gen.,n.sp.
- *Gamasomorpha loricata*,

- *Holocneminus piritarsus*
- “*Theridion*” *buxtoni*.

Widespread Pacific:

- *Odontodrassus javanus*, also in continental Asia;
- “*Coleosoma*” *adamsoni*: also in North and South America;
- *Dictis striatipes*: from China to Easter island, probably several subspecies.

Indo-pacific:

- *Creugas gulosus*, related genera only in South America;
- *Coleosoma floridana*, a synanthropic species.

* Endemic species.

– *Tetragnatha paschae*, the largest known species of *Tetragnatha*, not recorded since 1924.

* Species with an uncertain origin.

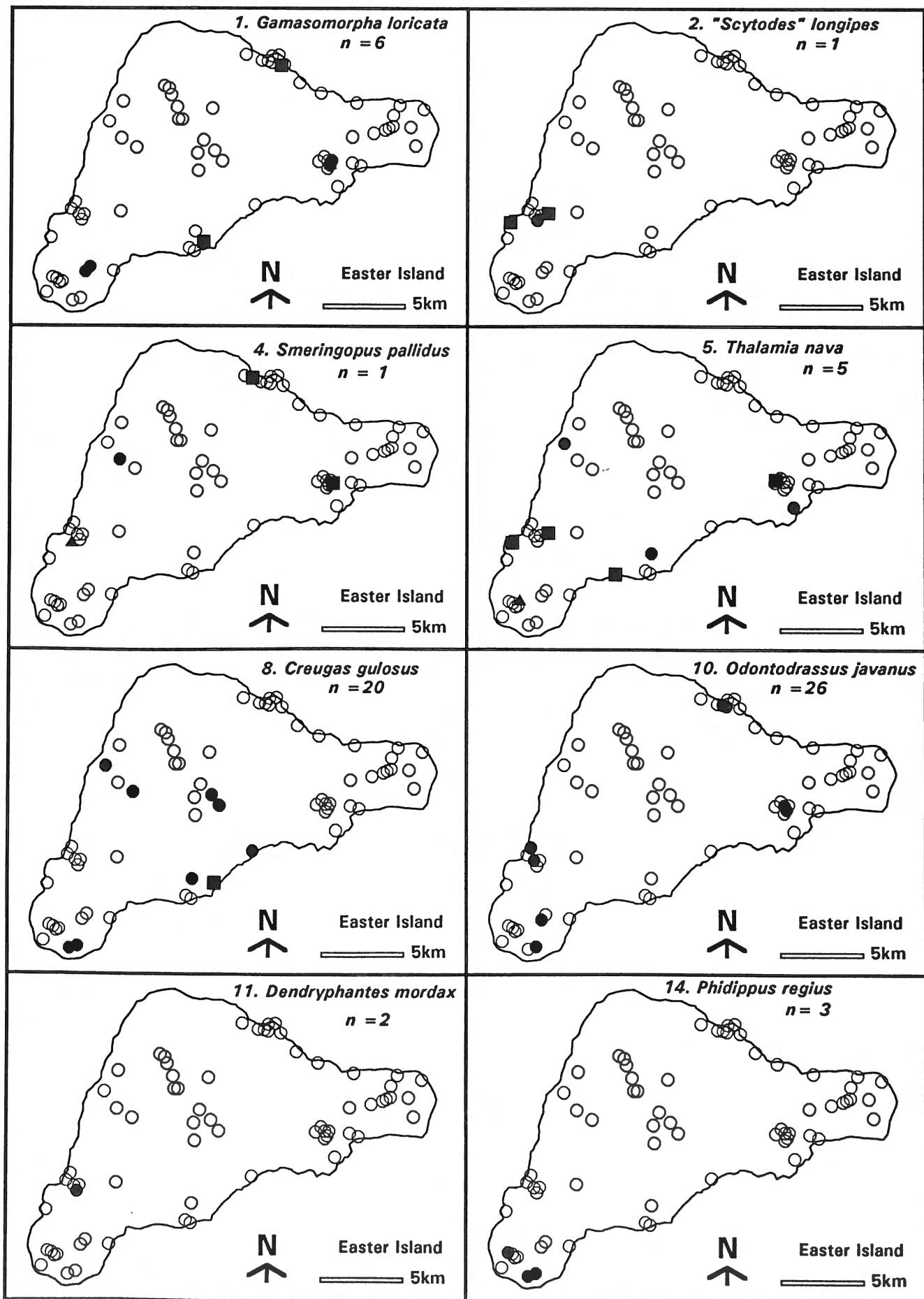
- *Urozelotes rusticus*, nearly cosmopolitan, synanthropic, not recorded from the other areas in Polynesia;
- *Hasarius adansoni*, pantropical, the most abundant spider in Easter Island in 1988;
- *Tetragnatha nitens*, nearly cosmopolitan;
- *Nesticodes rufipes*, pantropical;
- *Parasteatoda tepidarioria*, nearly cosmopolitan, rare in Polynesia;
- *Parasteatoda acoreensis*, a sporadic species, not present in other parts of Polynesia;
- *Latrodectus geometricus*, a widespread species in South America and South Africa, absent in the rest of Polynesia. The most abundant spider in Easter island in 1993.

Many synanthropic species of Easter Island are not found in the main archipelagoes of Polynesia (Samoa, Tonga, Cook, Society, Marquesas and Tuamotu Islands), but only in the southernmost, most temperate parts of Polynesia. Among widespread species, *Pholcus phalangioides*, *Tegenaria domestica*, *Urozelotes rusticus*, *Parasteatoda acoreensis* and *Latrodectus geometricus* are restricted to Easter Island in Polynesia, and the New World species *Loxosceles laeta*, *Dendryphantes mordax*, *Phidippus regius*, *Habronattus coecatus* and “*Gayenna*” *maculatipes* have similarly restricted Polynesian range.

Stearoea grossa, *Ostearius melanopygius* and *Tenuiphantes tenuis* are widespread in New Zealand and are also found in the Rapa Island group, in Rapa and/or Marotiri (*O. melanopygius*).

Thalamia nava, *Meriola arcifera* and *Parasteatoda tepidarioria* are sporadically known from other Polynesian archipelagoes, but are much more common in Easter Island.

The group of real pantropical species is represented by five species only, “*Scytodes*” *longipes*, *Smeringopus*



pallidus, *Menemerus bivittatus*, *Tetragnatha nitens* and *Nesticodes rufipes*, while *Theotima minutissima*, *Creugas gulosus*, *Coleosoma floridana* are widespread in the Indo-Pacific region and neighbouring areas (South America or Western part of Indian Ocean). *Opopaea silhouettei* most probably belong here too, although it has not yet been recorded in the intermediate area between the Seychelles and the Eastern Pacific region. This is possibly explained by its small size and possible confusion with other species of *Opopaea*.

Gamasomorpha loricata, *Dictis striatipes*, *Holocneminus piritarsis* and "*Coleosoma*" *adamsoni* are Pacific species that are widely found in natural and semi-natural habitats, that is, they are Polynesian species that have adapted to the local environment, where human activities have largely changed it. *Odontodrassus javanus* could be listed in this category as well, as it is quite abundant in natural habitats of the uninhabited Henderson Island (BENTON & LEHTINEN, 1995). *Gamasamorpha loricata*, a species of natural montane forest across the Pacific not only occurs on Easter island in the *Eucalyptus*-wood of Rano Kao but was also found around the crater lake of Rano Raraku.

The suggested origin of widespread synanthropic species is mentioned here for the first time for "*Scytodes*" *longipes* and *Ostearius melanopygus*.

Discussion

Only 36 species from Easter Island of spiders have been identified or confirmed. The spider fauna of Easter Island consists only of anthropochorous species, with many of these having a restricted range elsewhere (LEHTINEN, 1996). The only endemic species, *Tetragnatha paschae* has not been recorded since 1924 and it may even be extinct now. This species is very large and cannot be overlooked. Besides this, the local population of *Dictis striatipes* may deserve subspecific status. The new species of Orchestininae has also been recorded in the archipelagoes of Society and Marquesas Islands and in Henderson Island.

The closest important island group for comparison is the Pitcairn archipelago lying some 2200 Km in the west at the extreme southeastern edge of the Pacific plate. A checklist of Henderson island, belonging to this island group, was recently published by BENTON & LEHTINEN (1995). Besides the pantropical *Nesticodes rufipes*, Eastern Island and Henderson Island have 7 species in com-

mon with a clear Pacific origin: *Coleosoma floridana*, *Dictis striatipes*, Orchestininae n.gen., n.sp., *Gamasomorpha loricata*, *Holocneminus piritarsis*, *Odontodrassus javanus* and "*Theridion*" *buxtoni*.

Notable is the absence of wolfspiders (Lycosidae), present on most important archipelagoes and known as good colonizers.

Easter island is very isolated, as it is situated a long way from both the South American continent and the closer Pitcairn island group, and almost in the center of the South Pacific Gyre (BAERT & JOCQUE, 1993). The oceanic surface currents circulate around the island for a considerable distance, while the winds are all directed outwards from the Gyre. This implies that colonisation by means of rafting along sea currents and through the wind by ballooning might have been impossible. The species list shows clearly that all (but one) spider species must have been brought in by man, maybe since their early arrival but certainly during the more frequent visits over the last decades.

Examined material

All localities of the material examined are given here. They are ordered according to the year of collecting (between brackets at the end of each paragraph). The numbers between brackets behind the first locality name coincide with the locality number given in the Tables 1-3.

OONOPIDAE

Orchestininae n.gen., n.sp.

MOTU ROA (8), under stones in seashore meadow 8.5.1988: 1♀ 1♂ 5juv. (Lehtinen, 1988)

Gamasomorpha loricata

Playa de VAIHU (10), litter of *Eucalyptus* 8.5.1988: 1♂; Playa de OVAHE (13), under stones and grass tussocks 8.5.1988: 1♀. (Lehtinen, 1988)

R.KAO (16), 200m alt. 6-11.12.1993: 1♂; R.KAO (15), 200m alt., *Eucalyptus*-wood 30.11-6.12.1993: 1♂, 6-11.12.1993: 1♂, 11-17.12.1993: 1♂; R.RARAKU (25), 65m alt., crater lake 1-8.12.1993: 1♂; R.RARAKU (27), 70m alt., crater lake 1-8.12.1993: 1♂. (Baert & Desender, 1993)

Opopaea silhouettei

R. RARAKU (15), along crater lake 8.2.1976: 1♂. (Jacquemart, 1976)

HANGA ROA (2), litter of secondary forest 7.5.1988: 1♂. (Lehtinen, 1988)

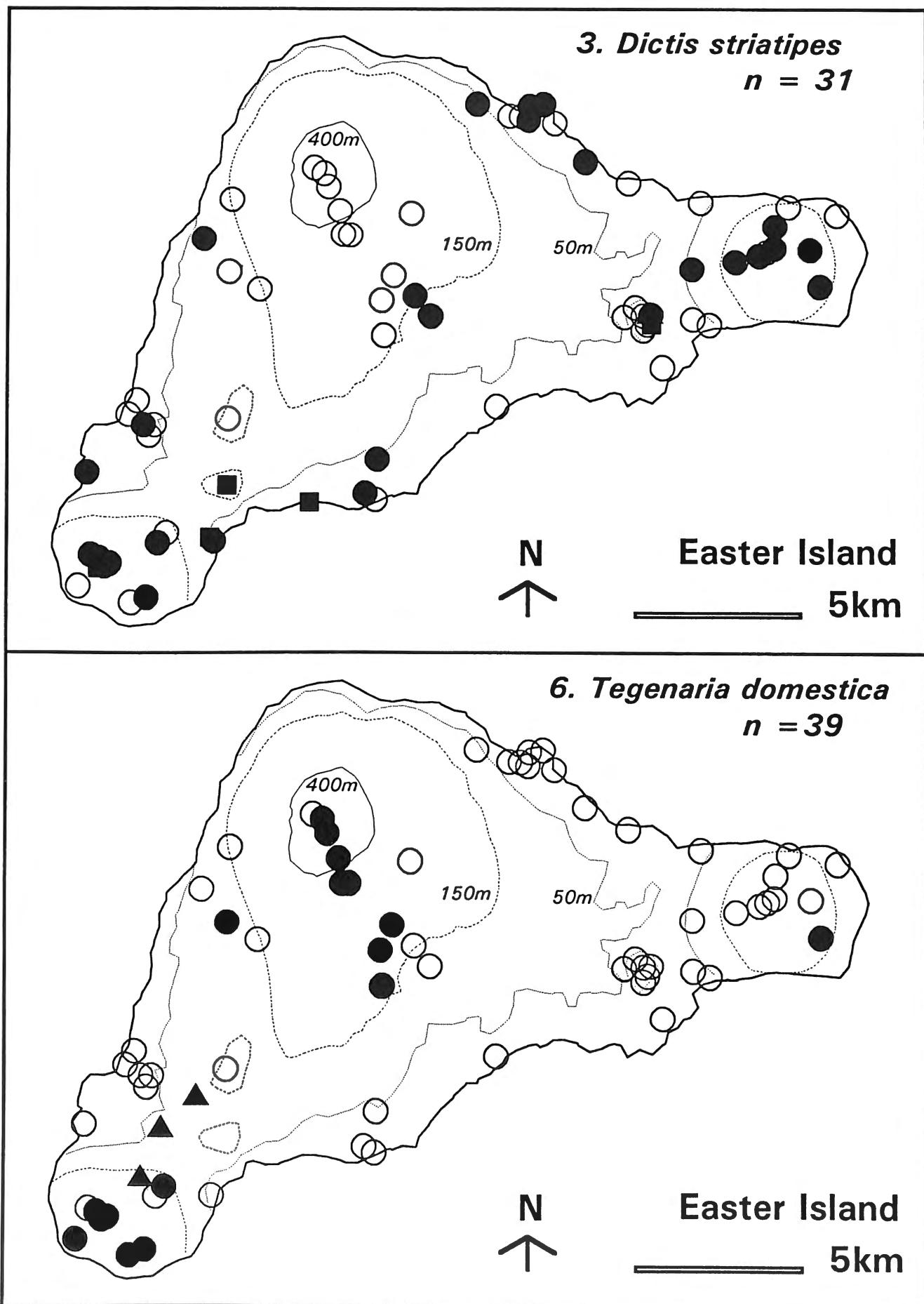
SCYTODIDAE

"*Scytodes*" *longipes*

HANGA ROA (1), stone bed on grassland 7.5.1988:



Fig. 3. – Distribution of Araneae species on Easter Island: circles indicate sites sampled in 1993; black dots indicate the presence of the species; black triangles show additional sites as derived from the material collected by Jacquemart (1976) or Dumont et al. (1990); black squares for the material of Lehtinen (1988).



5juv.; HANGA ROA (2), litter of secondary forest 7.5.1988: 2juv. (Lehtinen, 1988)

HANGA ROA (61), 40m alt., Residencial Gomero 13.12.1993: 1♀. (Baert & Desender, 1993)

Dictis striatipes n.sp.

R. RARAKU (15), along crater lake 8.2.1976: 1♂. (Jacquemart, 1976)

Along road from Hanga Paukura towards Anakena, 14.11.1982: 4♀♀ 7♂♂ 2juv. (Brignoli, 1982)

RANO RARAKU (7), crater lake, grass and Scirpus 9.5.1988: 1♂ 4juv. MOTU ROA (8), under stones in seashore meadow 8.5.1988: 2♀♀ 8♂♂ 1juv.; MAUNGA VAI OHAO (11), litter of *Eucalyptus globulus* plantation 10.5.1988: 1juv.; VINAPU (14), under stones in grassy slope 10.5.1988: 2♀♀ 4juv.; RANO KAO (15), grass and litter of *Psidium guajava* at the crater margin 10.5.1988: 6♀♀ 4♂♂ 18juv. (Lehtinen, 1988)

HANGA ROA (62), 75m alt., Ahu te Pehu 5.12.1993: 1♂ 1juv.; HANGA ROA (58), 20m alt., Ana Kai Tangata 7.12.1993: 1♂; HANGA ROA (59), 40m alt., Residencial Gomero 2.12.1993: 1juv.; M.TEREVAKA (30), 130m alt. 16.12.1993: 1♀; M.TEREVAKA (31), 170m alt. 8.12.1993: 2♂♂; Northern coast (45), 10m alt., ANAKENA 1-8.12.1993: 1♂, 8-13.12.1993: 1juv.; Northern coast, 10m alt., ANAKENA 8-13.12.1993: 1juv.; Northern coast (48), 15m alt., ANAKENA 13.12.1993: 1♂; Northern coast (49), 20m alt., M. PUHA 8.12.1993: 1♂; Northern coast (50), 20m alt., Te Pito Kura 17.12.1993: 1♂; POIKE (4), 65m alt. 10-18.12.1993: 1♀; POIKE (7), 190m alt., Cap ROGGEVEEN 15.12.1993: 1♂; POIKE (8), 200m alt 2-10.12.1993: 3♀♀; POIKE (9), 235m alt., Cap CUMMING 15.12.1993: 1♂subad.; POIKE (10), 265m alt., M. VAI HAVEA 10.12.1993: 1juv., 20.12.1993: 1♂; POIKE (11), 375m alt., SW crater rim 2.12.1993: 1♂, 2-10.12.1993: 1♀; POIKE (13), 380m alt., N E crater rim 20.12.1993: 1♂; R. KAO (14), 35m alt., Ahu TAHIRA 16.12.1993: 1♀ 1♂ 1♂subad.; R. KAO (21), 200m alt., crater 6-11.12.1993: 1♀; R. KAO (23), 125m alt., crater floor 6-11.12.1993: 1♀; R.KAO (16), 200m alt. 30.11-6.12.1993: 1♂; R.KAO (18), 300m alt., VAI A TARE 6.12.1993: 1♂; R.KAO (19), 300m alt 30.11-6.12.1993: 1♀ 1♂; R.KAO (21), 200m alt. 11-17.12.1993: 1♂; R.RARAKU (27), 70m alt., crater lake 1-8.12.1993: 1♂ 1juv., 8-14.12.1993: 1♂; Southern coast (52), 5m alt., VAIHU HANGA TEE

16.12.1993: 1♂ 1juv.; Southern coast (55), 40m alt., M. TE MIRO OONE 16.12.1993: 1♂. (Baert & Desender, 1993)

LOXOSCELIDAE

"Loxosceles" laeta

HANGA ROA (1), stone bed on grassland, 7.5.1988: 1juv. (Lehtinen, 1988)

OCHYROCERATIDAE

Theotima minutissima

VINAPU (14), under stones in grassy slope 10.5.1988: 18♂♂. (Lehtinen, 1988)

PHOLCIDAE

Smeringopus pallidus

Along road from Hanga Paukura towards Anakena, 14.11.1982: 1♀ 4♂♂ 1juv. (Brignoli, 1982)

RANO RARAKU (7), crater lake, grass and Scirpus, 9.5.1988: 1♂ 1juv.; ANAKENA (5), stones on thick grass 8.5.1988: 1♂. (Lehtinen, 1988)

HANGA ROA, 40m alt., Villa Tiki 16.8.1990: 1♂. (Dumont, 1990)

HANGA ROA (63), 100m alt., Ana te Pahu 5.12.1993: 1♂. (Baert & Desender, 1993)

Holocneminus piritarsis

ANAKENA (5), stones on thick grass 8.5.1988: 1♀ 14♂♂ 1juv. (Lehtinen, 1988)

Pholcus phalangioides

HANGA ROA, 15.12.1934: 2♀ 2♂♂. (Mission Franco-Belge, 1934/1935)

OECOBIIDAE

Thalamia nava

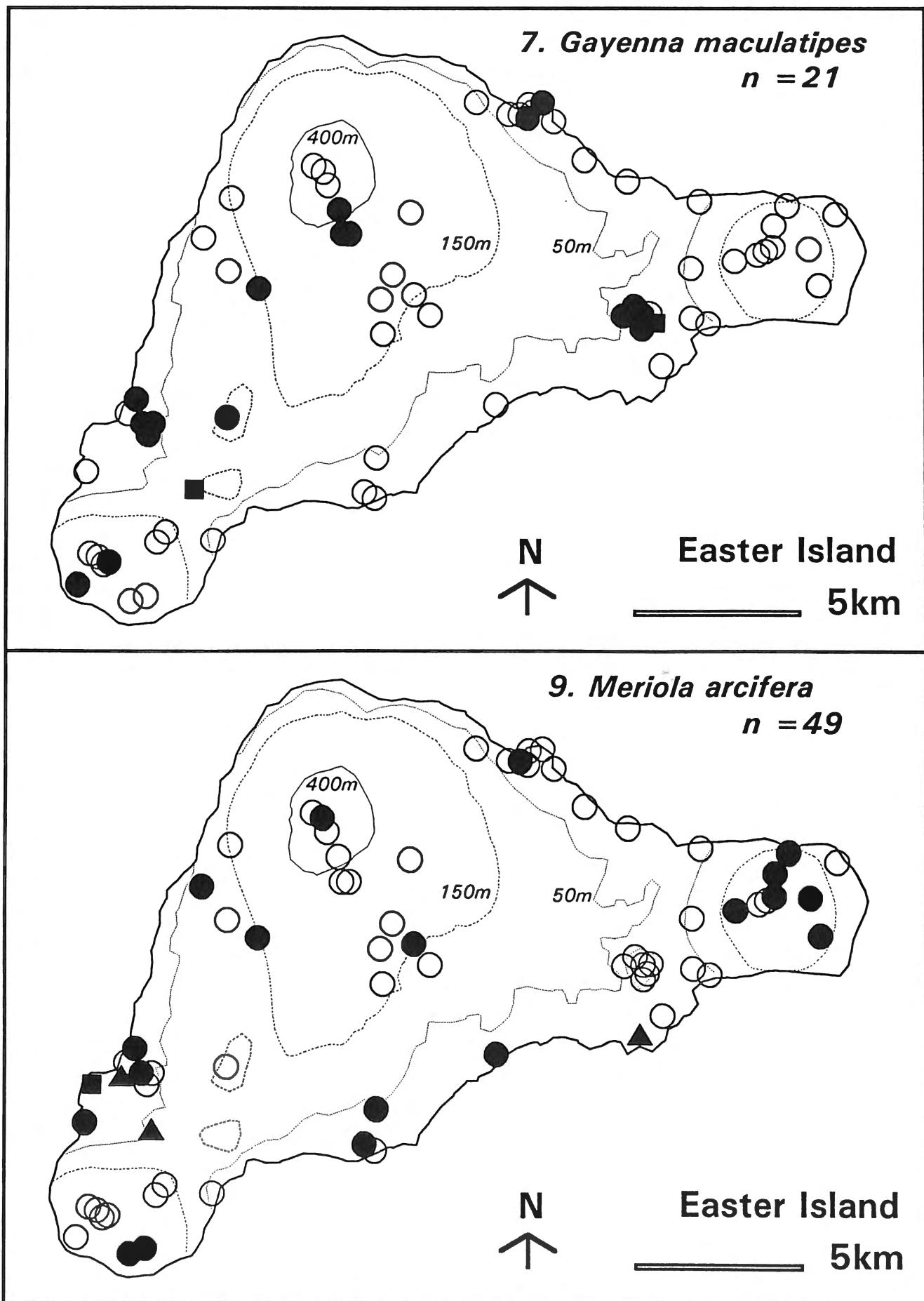
R. KAO (3), crater 12.2.1976: 1♀subad. 1juv. (Jacquemart, 1976)

HANGA ROA (1), stone bed on grassland 7.5.1988: 1♀ 2♂♂ 3juv.; HANGA ROA (2), in litter of secondary forest 7.5.1988: 3♂♂ 3juv.; RANO RARAKU (6), under bark of *Eucalyptus* 8.5.1988: 2juv.; MOTU ROA (8), under stones in seashore 8.5.1988: 2♂♂ 12juv. (Lehtinen, 1988)

HANGA ROA (62), 75m alt., Ahu te Pehu 5.12.1993: 1♂; Southern coast (54), 15m alt., HANGA TUU HATA 14-18.12.1993: 1♀; Southjern coast (55), 40m alt., M. TE MIRO OONE 16.12.1993: 1♀ 2♂♂. (Baert & Desender, 1993)



Fig. 4. – Distribution of Araneae species on Easter Island; see legend Fig. 2 for further explanation.



AGELENIDAE

Tegenaria domestica

Surroundings of Vaitea 10.12.1934: 4♂♂. (Mission Franco-Belge 1934/1935)

R. KAO (4), along road to Orongo 12.2.1976: 1♂; M. TEREVAKA, Rano Aroi 27.2.1976: 1♀ 4♂♂. (Jacquemart, 1976)

Along road from Ahu Akivi towards Orongo, 13-15.11.1982: 3♂♂ 1♂subad. 3juv. (Brignoli, 1982)

Haringa Vai Ohao, Eucalyptus-wood, 120m alt., 16.8.1990: 1juv. (Dumont, 1990)

HANGA ROA (63), 100m alt., Ana te Pahu 5.12.1993: 1♀ 2♂♂ 1juv.; M. TEREVAKA (32), 175m alt., Eucalyptus-wood 9.12.1993: 1♂; M. TEREVAKA (33), 185m alt., VAITEA 3-10.12.1993: 1♀ 1♀subad., 10-20.12.1993: 1♂ 1juv.; M. TEREVAKA (34), 210m alt. 16.12.1993: 1♀subad.; M. TEREVAKA (36), 370m alt. 10-20.12.1993: 2♀♀ 1♀subad.; M. TEREVAKA (37), 380m alt. 3-10.12.1993: 1♀; M. TEREVAKA (38), 425m alt., RANO AROI 3-10.12.1993: 1♂; M. TEREVAKA (39), 445m alt. 3-10.12.1993: 1♀ 1♂subad., 20.12.1993: 6♂♂ 1♀subad. 1♂subad., 10-20.12.1993: 1♀; M. TEREVAKA (40), 450m alt. 3-10.12.1993: 1♂subad.; POIKE (7), 190m alt., Cap ROGGEVEEN 15.12.1993: 1♀ 1♂; R. KAO (15), 200m alt., Eucalyptus-wood 30.11-6.12.1993: 1♂, 6-11.12.1993: 1♂; R. KAO (21), 200m alt., crater 6-11.12.1993: 1♂; R. KAO (22), 130m alt., crater floor 6-11.12.1993: 1♀; R. KAO (23), 125m alt., crater floor 6-11.12.1993: 2♂♂; R. KAO (17), 300m alt., ORONGO 6.12.1993: 1juv.; R. KAO (18), 300m alt., VAI A TARE 6.12.1993: 5♂♂ 1♂subad., 17.12.1993: 3♂♂ 1juv.; R. KAO (20), 305m alt., KARI-KARI 6.12.1993: 1♂ 1♀subad. 3juv.; R. KAO (21), 200m alt., crater 30.11-6.12.1993: 1♀subad. 1♂subad.; R. KAO (22), 130m alt., crater floor 30.11-6.12.1993: 1♂; R. KAO (23), 125m alt., crater lake 30.11-6.12.1993: 1♀ 1♂ 1juv., 11-17.12.1993: 1♂. (Baert & Desender, 1993)

ANYPHAENIDAE

“*Gayenna*” *maculatipes*

HANGA ROA (3), in vegetation 7.5.1988: 1♀ 8♂♂ 10juv.; RANO RARAKU (7), crater lake, *Scirpus* sp. and grass 9.5.1988: 1juv. (Lehtinen, 1988)

HANGA ROA (59), 40m alt., Residencial Gomero, grassland in garden 7.12.1993: 1♀, 15.12.1993: 1♀; HANGA ROA (60), 40m alt., Residencial Gomero, garden 4-

9.12.1993: 2juv., 9-12.1993: 1♀subad.; HANGA ROA (61), 40m alt., Residencial Gomero, in house 30.11.1993: 1♀, 21.12.1993: 2♀♀; HANGA ROA (57), 5m alt., O ORONGO 4.12.1993: 1♂; Hanga Roa (64), 130m alt., Ahu Akivi 5.12.1993: 1♂ 1juv.; HANGA ROA (66), 140m alt., Puna Pau 5.12.1993: 1♀; M. TEREVAKA (36), 370m alt., edge of small waterbody 3-10.12.1993: 1♀subad. 1juv. 10-20.12.1993: 1♂subad.; M. TEREVAKA (37), 380m alt. 3-10.12.1993: 1juv., 10-20.12.1993: 1♂; M. TEREVAKA (38), 425m alt., RANO AROI 3-10.12.1993: 1juv.; Northern coast (45), 10m alt., ANAKENA 1-8.12.1993: 1♀ 3♂♂ 1♀subad. 5juv., 8-13.12.1993: 1♂, 13-18.1993: 3juv.; Northern coast (48), 20m alt., M. PUHA 13.12.1993: 1juv.; R. KAO (17), 300m alt., ORONGO 6.12.1993: 1♀ 1♀subad.; RANO KAO (23), 125m alt., 30.11-6.12.1993: 1juv.; R. RARAKU (24), 50m alt. 8.12.1993: 2juv.; R. RARAKU (26), 65m alt. 14-18.12.1993: 1juv.; R. RARAKU (28), 75m alt. 8.12.1993: 1♀; R. RARAKU (29), 100m alt. 8-14.12.1993: 3♂♂ 1♂subad., 14-18.1993: 2♂♂. (Baert & Desender, 1993)

CORINNIDAE

Creugas gulosus

Along road from Hanga Paukura towards Anakena, 14.11.1982: 2♂♂ 2juv. (Brignoli, 1982)

HUA REVA (9), under stones in seashore 8.5.1988: 6juv. (Lehtinen, 1988)

HANGA ROA (62), 75m alt., Ahu te Pehu 5.12.1993: 1♀ 3♂♂subad. 1juv.; HANGA ROA (64), 130m alt., Ahu Akivi 5.12.1993: 1♀ 1♀subad. 1♂subad. 3juv.; M. TEREVAKA (30), 130m alt., encanada 16.12.1993: 1♀ 4♂♂; M. TEREVAKA (31), 170m alt., 8.12.1993: 1♀subad.; R. KAO (18), 300m alt., VAI A TARE 6.12.1993: 4♀♀ 5♂♂ 3♀♀subad. 4♂♂subad., 17.12.1993: 2♂♂ 1♀subad. 2♂♂subad.; R. KAO (20), 305m alt., KARI-KARI 6.12.1993: 2juv.; Southern coast (53), 10m alt., Cap Eu 18.12.1993: 1♀ 1♂ 1juv.; Southern coast (55), 40m alt., M. Te Miro Oone 16.12.1993: 1juv. (Baert & Desender, 1993)

Meriola arcifera

HANGA ROA (5), Mataveri 27.2.1976: 1♂; HANGA ROA (8) Mataveri 2.2.1976: 1♂; Southern coast (17), Ahu Onemaniki 26.2.1976: 1♀. (Jacquemart, 1976)

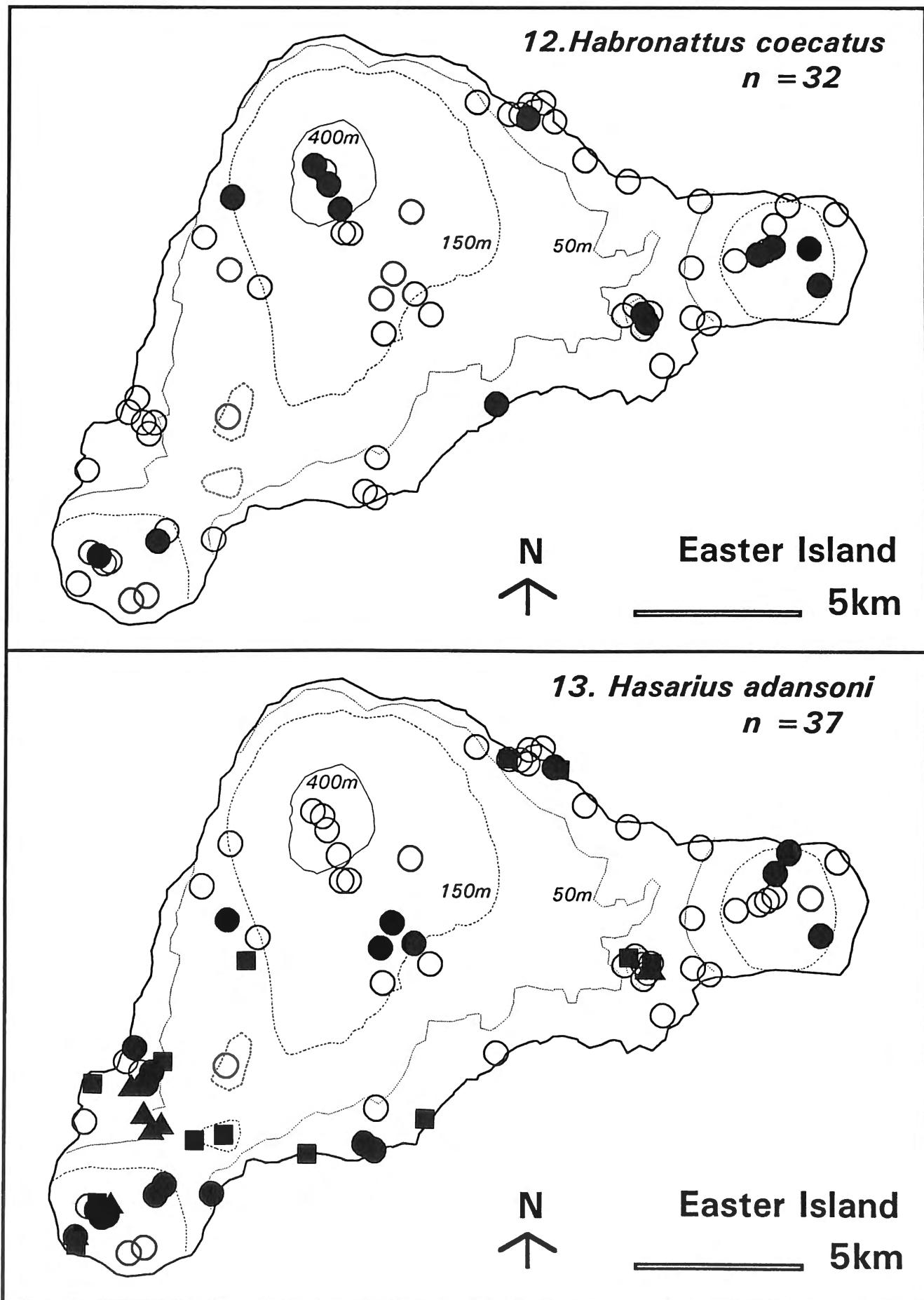
Along road from Hanga Paukura towards Anakena, 14.11.1982: 4♂♂; Along road from Ahu Akivi towards Orongo, 13-15.11.1982: 3♂♂ 1♂subad. 3juv. (Brignoli, 1982)

HANGA ROA (1), stone bed on grassland 7.5.1988: 1♂ 8juv. (Lehtinen, 1988)

HANGA ROA (59), 40m alt., Residencial Gomero, grassland 9-19.12.1993: 1♀ 2♂♂; HANGA ROA (62), 75m



Fig. 5. – Distribution of Araneae species on Easter Island; see legend Fig. 2 for further explanation.



alt., Ahu te Pehu 5.12.1993: 1♂; HANGA ROA (57), 5m alt., O ORONGO 4.12.1993: 1♂; HANGA ROA (58), 20m alt., Ana Kai Tangata 7.12.1993: 1♀ 2♂♂; HANGA ROA (64), 130m alt., Ahu Akivi 5.12.1993: 1♀ 5♂♂; M.TEREVAKA (31), 170m alt. 8.12.1993: 1♂; M.TEREVAKA (39), 445m alt., subtop 3-10.12.1993: 1♀; Northern coast (44), 5m alt., ANAKENA 1-8.12.1993: 1♂; POIKE (6), 170m alt., M. PAREHE 14.12.1993: 1♀; POIKE (7), 190m alt., Cap ROGGEVEEN 15.12.1993: 1♀; POIKE (8), 200m alt. 2-10.12.1993: 1♂; POIKE (9), 235m alt., Cap CUMMING 15.12.1993: 5♂♂; POIKE (10), 265m alt., M. VAI HAVEA 10.12.1993: 5♂♂; POIKE (13), 380m alt. 2-10.12.1993: 1♂; R.KAO (18), 300m alt., VAI A TARE 6.12.1993: 1♀ 5♂♂, 17.12.1993: 1♂; R.KAO (20), 305m alt., KARI-KARI 6.12.1993: 1♀ 2♂♂; Southern coast (52), 5m alt., VAIHU HANGA TEE 16.12.1993: 1♂; Southern coast (53), 10m alt., CAP EU 18.12.1993: 5♂♂; Southern coast (55), 40m alt., M. TE MIRO OONE 16.12.1993: 2♂♂. (Baert & Desender, 1993)

GNAPHOSIDAE

Odontodrassus javanus

HANGA ROA (59), 40m alt., Residencial Gomero 30.11-6.12.1993: 1♀, 4-9.12.1993: 1♀, 9-19.12.1993: 1♀; HANGA ROA (57), 5m alt., O ORONGO 4.12.1993: 1♀; Northern coast (44), 5m alt., ANAKENA 1-8.12.1993: 2♀♀; Northern coast (45), 10m alt., ANAKENA 1-8.12.1993: 1♂, 8-13.12.1993: 1♀, 13-18.12.1993: 1♀ 1♂ 1♂subad.; RANO KAO (16), 200m alt. 30.11-6.12.1993: 2♀♀ 3♂♂, 6-11.12.1993: 2♂♂ 1♂subad., 11-17.12.1993: 4♀♀; R. KAO (18), 300m alt., VAI A TARE 17.12.1993: 1♀; R.RARAKU (25), 65m alt., craterlake 1-8.12.1993: 1♀ 1♂; R.RARAKU (26), 65m alt., craterlake 1-8.12.1993: 1♀ 1♂. (Baert & Desender, 1993)

Urozelotes rusticus

M. TEREVAKA (13), Rano Aroi 27.2.1976: 1♂. (Jacquemart, 1976)

SALTICIDAE

Dendryphantes mordax

HANGA ROA (61), 40m alt., Residencial Gomero 21.12.1993: 1♀ 1♂. (Baert & Desender, 1993)

Habronattus coecatus

Along road from Ahu Akivi towards Orongo, 13-15.11.1982: 1♂. (Brignoli, 1982)

HANGA ROA (65), 135m alt, 1km N v TE PEU



Fig. 6. – Distribution of Araneae species on Easter Island; see legend Fig. 2 for further explanation.

18.12.1993: 1♀; M. TEREVAKA (38), 425m alt., RANO AROI 3-10.12.1993: 2♀♀, 10-20.1993: 3♀♀ 1♂; M.TEREVAKA (40), 450m alt. 10-20.12.1993: 1♀; M.TEREVAKA (41), 490m alt., top 10.12.1993: 1♀; Northern coast (45), 10m alt., ANAKENA 1-8.12.1993: 1♂ 1♀subad., 8-13.12.1993: 1♂, 13-18.12.1993: 1♂; POIKE (7), 190m alt., Cap ROGGEVEEN 15.12.1993: 2♀♀ 1♂; POIKE (9), 235m alt., Cap CUMMING 15.12.1993: 1♂; POIKE (11), 375m alt. 10-20.12.1993: 1♀ 1♂; POIKE (13), 380m alt. 10-20.12.1993: 2♂♂; R. KAO (16), 200m alt. 30.11-6.12.1993: 1♀ 2♂♂, 6-11.12.1993: 1♂; R. KAO (21), 200m alt., inside crater 30.11-6.12.1993: 1♂, 6-11.12.1993: 1♀; R.RARAKU (25), 65m alt. 1-8.12.1993: 3♂♂ 1♂subad.; R.RARAKU (26), 65m alt., 8-14.12.1993: 1♂; Southern coast (53), 10m alt., CAP EU 18.12.1993: 1♂.

Hasarius adansoni

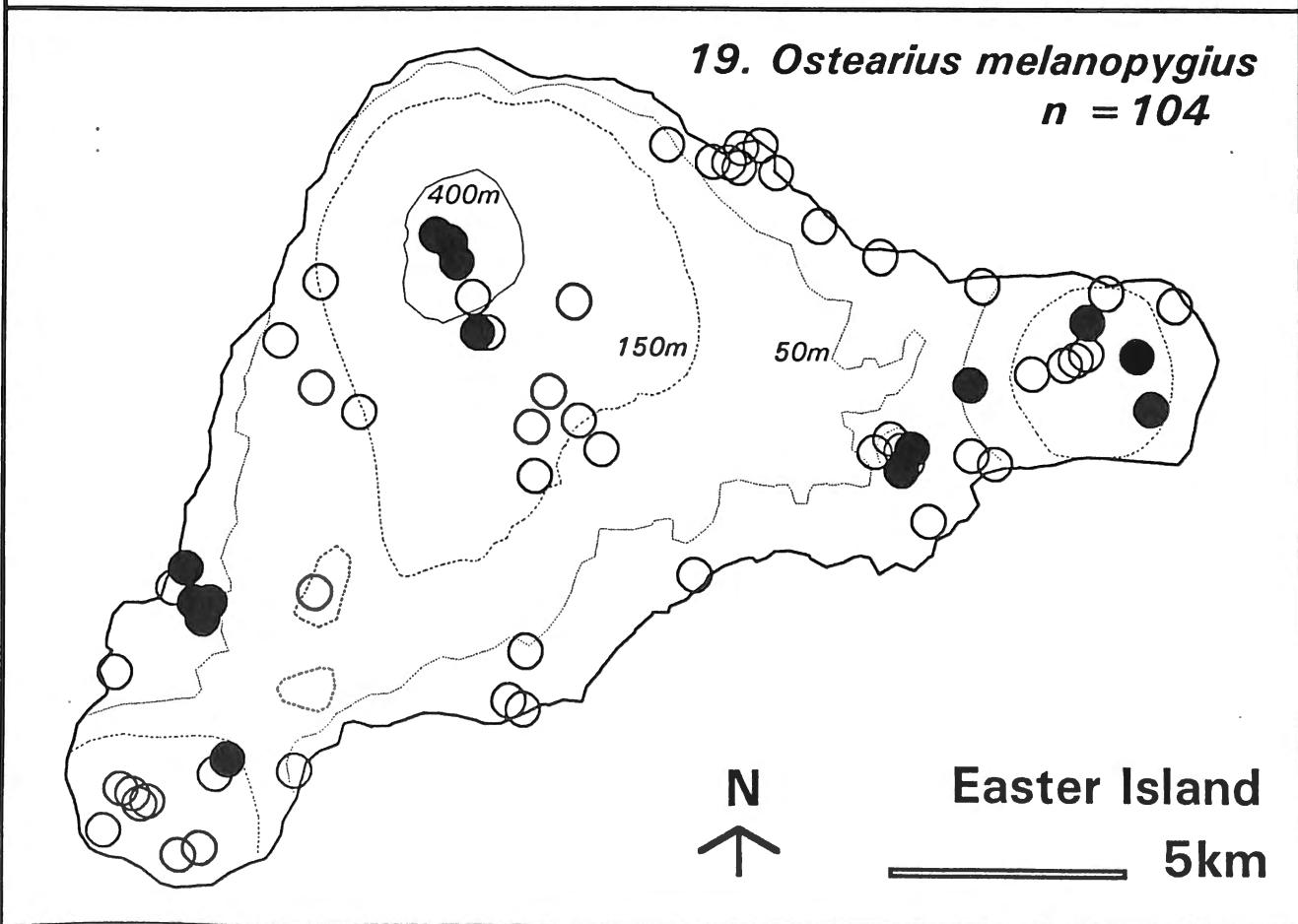
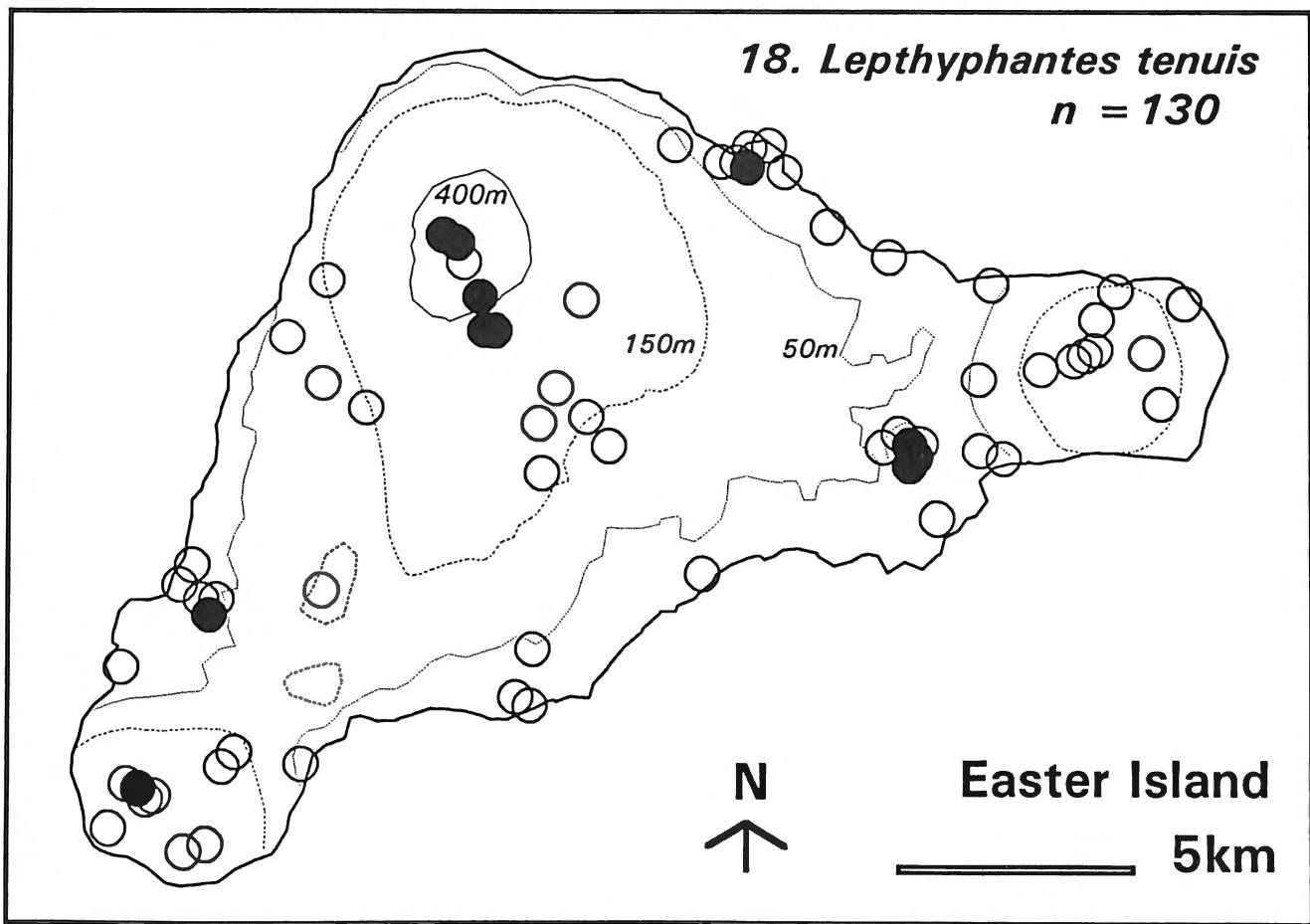
R. KAO (1), Orongo 2.2.1976: 2♂♂; R. KAO (3), crater 12.2.1976: 1♀; HANGA ROA (5), Mataveri garden 27.2.1976: 3♂♂; HANGA ROA (6), Mataveri around houses 2.2.1976: 1♂; M. TEREVAKA (13), Rano Aroi 27.2.1976: 1♀; R. RARAKU (15), along crater lake 8.2.1976: 3♀♀ 5♂♂ 1♀subad. (Jacquemart, 1976)

Along road from Hanga Paukura towards Anakena, 14.11.1982: 3♂♂; Along road from Ahu Akivi towards Orongo, 13-15.11.1982: 2♀♀ 1♂. (Brignoli, 1982)

HANGA ROA (1), stone bed on grassland 7.5.1988: 1♀ 6♂♂ 1juv.; HANGA ROA (2), litter of secondary forest 7.5.1988: 3♂♂ 1juv.; HANGA ROA (3), in vegetation 7.5.1988: 2juv.; ANAKENA (5), stones on thick grass 8.5.1988: 2♂♂; RANO RARAKU (7), crater lake, grass and *Scirpus* 9.5.1988: 2♀♀ 1♂ 14juv.; ROTO RARAKU (6), under bark of *Eucalyptus* 8.5.1988: 1♀ 2♂♂ 2juv.; MOTU ROA (8), under stones in seashore 8.5.1988: 2♀♀ 1juv.; HUA REVA (9), under stones in seashore 8.5.1988: 1♂ 3juv.; MAUNGA VAI OHAO (11), litter of *Eucalyptus globulus* plantation 10.5.1988: 1♂ 2juv.; MAUNGA TEREVAKA (12), Akivi, under stones 9.5.1988: 1♀; Playa de OVAHE (13), under stones and grass tussocks 8.5.1988: 4juv.; RANO KAO (15), grass and litter of *Psidium guajava* at the crater margin 10.5.1988: 1♀; ORONGO (16), walls of a house 10.5.1988: 2juv. (Lehtinen, 1988)

HANGA ROA, 40m alt., Villa Tiki 16.8.1990: 2♂♂. (Dumont, 1990)

HANGA ROA (60), 40m alt., Residencial Gomero, garden 30.11-4.12.1993: 1♀, 4-9.12.1993: 2♀♀; HANGA ROA (61), 40m alt., Residencial Gomero, inside house 30.11.1993: 1♀ 1♂, 7.12.1993: 1♂, 13.12.1993: 1♂; HANGA ROA (57), 5m alt., O ORONGO 4.12.1993: 1♀; HANGA ROA (63), 100m alt., Ana te Pahu 5.12.1993: 1♀ 1juv.; M.TEREVAKA (31), 170m alt. 8.12.1993: 2♂♂ 1♂subad. 1juv.; M.TEREVAKA (33), 185m alt., VAITEA 3-10.12.1993: 1♂ 1juv.; M.TERE-



VAKA (34), 210m alt. 16.12.1993: 1♀; Northcoast (42), 0m alt., OVAHE 17.12.1993: 1♂; POIKE (6), 170m alt., M. PAREHE 14.12.1993: 1♀ 2♂♂; POIKE (7), 190m alt., Cap ROGGEVEEN 15.12.1993: 2♂♂; POIKE (10), 265m alt., M. VAI HAVEA 10.12.1993: 1♀ 4♂♂; R. KAO (14), 35m alt., Ahu TAHIRA 16.12.1993: 1♂ 2juv.; R. KAO (15), 200m alt., Eucalyptus-wood 6-11.12.1993: 1♂; R. KAO (16), 200m alt. 30.11-6.12.1993: 1♀ 1♂, 6-11.12.1993: 1♂, 11-17.12.1993: 1♀; R. KAO (21), 200m alt., crater 6-11.1993: 1♂; R. KAO (23), 125m alt., crater floor 6-11.1993: 1♂; R. KAO (17), 300m alt., ORONGO 6.12.1993: 1♂ 1♂subad. 1juv.; R. KAO (22), 130m alt., crater floor 30.11-6.12.1993: 1♂; Southern coast (51), 0m alt., VAIHU HANGA TEE 16.12.1993: 1♂; Southern coast (52), 5m alt., VAIHU HANGA TEE 16.12.1993: 1♂. (Baert & Desender, 1993)

Menemerus bivittatus

RANO RARAKU (7), crater lake, grass and Scirpus 9.5.1988: 1♀ 1juv. (Lehtinen, 1988)

HANGA ROA (60), 40m alt., Residencial Gomero 9-12.12.1993: 1♀; HANGA ROA (61), 40m alt., Residencial Gomero 13.12.1993: 2♀♀ 1♂, 21.12.1993: 1♀ 2♂♂; HANGA ROA (59), 40m alt., Residencial Gomero 2.12.1993: 1♀. (Baert & Desender, 1993)

Phidippus regius

Along road from Ahu Akivi towards Orongo, 13-15.11.1982: 1♂. (Brignoli, 1982)

R. KAO (19), 300m alt. 6-11.12.1993: 1♂subad., 11-17.12.1993: 2juv.; R. KAO (18), 300m alt., VAI A TARE 6.12.1993: 1♀ 1juv.; R. KAO (20), 305m alt., KARI-KARI 6.12.1993: 1♂ 1♂subad. (Baert & Desender, 1993)

Plexippus paykulli

R. KAO (4), along the road to Orongo 12.2.1976: 1♂; M. TEREVAKA (11), Ahu Akivi 12.2.1976: 1♀ 1♂ 1♀subad.; R. RARAKU (16), western slope 8.2.1976: 4♂♂. (Jacquemart, 1976)

ROTO RARAKU (6), under bark of Eucalyptus 8.5.1988: 2juv. (Lehtinen, 1988)

HANGA ROA (65), 135m alt., 1km N v TE PEU 18.12.1993: 3♂♂; M. TEREVAKA (30), 130m alt. 16.12.1993: 1♂; POIKE (5), 150m alt., Cap O'Higgins 14.12.1993: 2♀♀ 8♂♂ 1♀subad. 2juv. (Baert & Desender, 1993)



Fig. 7. – Distribution of Araneae species on Easter Island; see legend Fig. 2 for further explanation.

TETRAGNATHIDAE

Tetragnatha nitens

R. KAO (2), along lake border 12.2.1976: 1♂ 1juv. (Jacquemart, 1976)

M. TEREVAKA (36), 370m alt. 20.12.1993: 1♀subad. (Baert & Desender, 1993)

LINYPHIIDAE

Leptyphantes tenuis

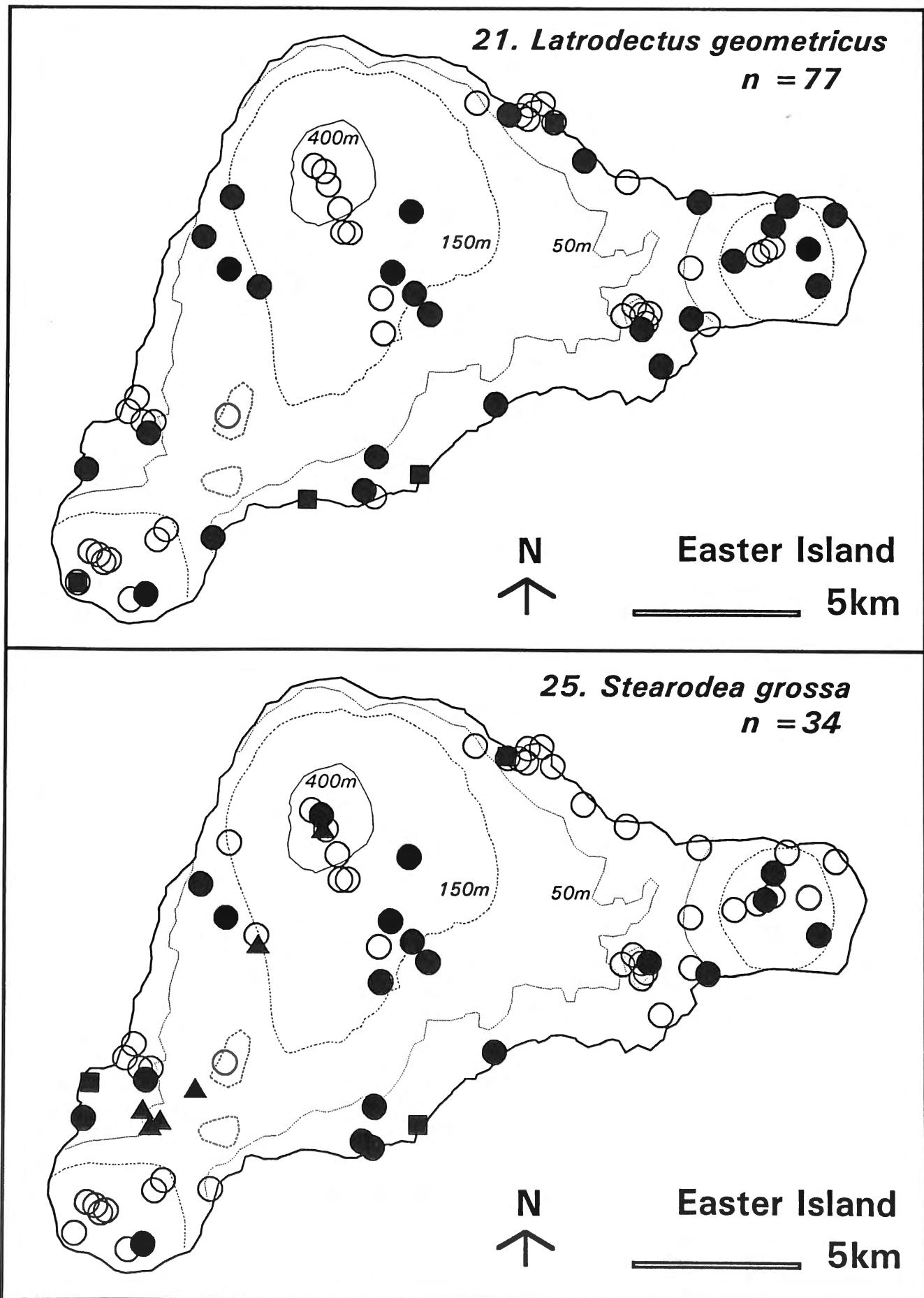
R. RARAKU (25), 65m alt., crater lake 1-8.12.1993: 1♂, 8-14.12.1993: 2♀♀; R. RARAKU (26), 65m alt., crater-lake 1-8.12.1993: 1♂; R. RARAKU (29), 100m alt., crater 14-18.12.1993: 3♀♀; HANGA ROA (61), Residencial Gomero 30.11.1993: 1♂; M. TEREVAKA (36), 370m alt. 3-10.12.1993: 3♀♀ 6♂♂ 1♀subad. 4juv.; M. TEREVAKA (37), 370m alt., waterbody 3-10.12.1993: 4♀♀ 4♂♂ 1juv.; M. TEREVAKA (38), 425m alt., RANO AROI 3-10.12.1993: 13♀♀ 5♂♂ 1juv., 10-20.12.1993: 10♀♀ 10♂♂ 1juv., 20.12.1993: 2♂♂; M. TEREVAKA (39), 445m alt. 3-10.12.1993: 1♀ 2♂♂, 10-20.12.1993: 1♀ 1♂; M. TEREVAKA (41), 490m alt. 10.12.1993: 1♂, 3-10.12.1993: 6♀♀ 8♂♂, 10-20.12.1993: 5♀♀ 6♂♂ 1juv.; Northern coast (45), 10m alt., ANAKENA 1-8.12.1993: 1♂subad.; R. KAO (21), 200m alt., crater 30.11-6.12.1993: 3♀♀ 2♂♂, 6-11.12.1993: 2♀♀ 2♂♂, 11-17.12.1993: 1♀. (Baert & Desender, 1993)

ERIGONIDAE

Ostearius melanopygius

Along road from Hanga Paukura towards Anakena, 14.11.1982: 1♂. (Brignoli, 1982)

HANGA ROA (59), 40m alt., Residencial Gomero 30.11-4.12.1993: 2♀♀, 4-9.12.1993: 4♀♀ 3♂♂, 12.12.1993: 2♀♀, 9-19.12.1993: 8♀♀ 3♂♂ 2♀♀subad. 1juv.; HANGA ROA (60), 40m alt., Residencial Gomero 30.11-4.12.1993: 1♀ 2♂♂, 4-9.12.1993: 3♀♀ 1♂ 1♂subad. 1juv., 9-19.12.1993: 1♀; HANGA ROA (57), 5m alt., O ORONGO 4.12.1993: 1♂; HANGA ROA (61), 40m alt., Residencial Gomero 30.11.1993: 1♀ 2♂♂; M. TEREVAKA (37), 380m alt. 3-10.12.1993: 6♀♀ 1♂, 10-20.12.1993: 4♀♀ 1♂; M. TEREVAKA (39), 445m alt. 3-10.12.1993: 15♀♀ 1♂, 10-20.12.1993: 5♀ 1♂; M. TEREVAKA (40), 450m alt. 3-10.12.1993: 3♀♀ 2♂♂, 10-20.12.1993: 2♀♀; M. TEREVAKA (41), 490m alt. 3-10.12.1993: 5♀♀ 2♂♂ 1♀subad., 10-20.12.1993: 9♀♀ 3♂♂; POIKE (4), 65m alt. 10-18.12.1993: 1♂; POIKE (7), 190m alt., Cap ROGGEVEEN 15.12.1993: 2♂♂; POIKE (9), 235m alt., Cap CUMMING 15.12.1993: 3♂♂; POIKE (10), 265m alt., M. VAI HAVEA 10.12.1993: 1♀subad.; R. KAO (15), 200m alt., Eucalyptus-wood 30.11-6.12.1993: 1♀; R. RARAKU (27), 70m alt., craterlake 1-8.12.1993: 2♂♂; R. RARAKU (29), 100m alt., crater 14-18.12.1993: 1♀. (Baert & Desender, 1993)



ARANEIDAE

? *Zygiella* sp.

ORONGO (16), walls of a house, 10.5.1988: 1subad. (Lehtinen, 1988)

THERIDIIDAE

Coleosoma floridana

Along road from Hanga Paukura towards Anakena, 14.11.1982: 2♀♀ 5♂♂. (Brignoli, 1982)

HANGA ROA (3), in vegetation 7.5.1988: 1juv.; HANGA ROA (1), stone bed on grassland 7.5.1988: 1♂; RANO RARAKU (7), crater Lake, grass and *Scirpus* 9.5.1988: 4♀♀; RANO KAO (15), grass and litter of *Psidium guajava* at the crater margin 10.5.1988: 3♂♂ 3juv.; MOTU ROA (8), under stones in seashore meadow 8.5.1988: 1 ♂. (Lehtinen, 1988)

HANGA ROA (59), 40m alt., Residencial Gomero, grassland in garden 30.11-4.12.1993: 1♀, 4-9.12.1993: 1juv., 9-19.12.1993: 2♀♀; HANGA ROA (60), 40m alt., Residencial Gomero, garden 4-9.12.1993: 1♀; M.TEREVAKA (37), 380m alt. 10-20.12.1993: 1♂; M.TEREVAKA (41), 490m alt., top pampa 3-10.12.1993: 1♂, 10-20.12.1993: 1♀; Northern coast (45), 10m alt., ANAKENA, tall grasses 1-8.12.1993: 4♀♀, 8-13.12.1993: 1♀, 13-18.12.1993: 1♀; R. KAO (16), 200m alt., pampa 6-11.12.1993: 1♀; R. KAO (21), 200m alt., inside crater rim 6-11.12.1993: 1♀ 1♂; R.RARAKU (26), 65m alt., Edge of crater lake 1-8.12.1993: 2♀♀ 1♂. (Baert & Desender, 1993)

"*Coleosoma*" *adamsoni*

HANGA ROA (3), in vegetation 7.5.1988: 1♀; HUA REVA (9), under stones in seashore 8.5.1988: 1♂; RANO RARAKU (7), crater lake, grass and *Scirpus* 9.5.1988: 2♂♂ 1juv. (Lehtinen, 1988)

Latrodectus geometricus

Along road from Hanga Paukura towards Anakena, 14.11.1982: 1♀ 10♂♂ 1juv. (Brignoli, 1982)

MOTU ROA (8), under stones in seashore meadow 8.5.1988: 1♀ 20♂♂ 7juv.; HUA REVA (9), under stones in seashore 8.5.1988: 4♂♂ 2juv.; Playa de OVAHE (13), under stones and grass tussocks in seashore 8.5.1988: 3♂♂ 2juv.; ORONGO (16), on walls of a house 10.8.1988: 1♂. (Lehtinen, 1988)

HANGA ROA (61), 40m alt., Residencial Gomero, inside

house 21.12.1993: 1♂ 1juv.; HANGA ROA (62), 75m alt., Ahu te Pehu 5.12.1993: 2♀♀ 5♂♂ 1♀subad. 2juv.; HANGA ROA (65), 135m alt., 1km N v TE PEU 19.12.1993: 3♂♂ 1juv.; HANGA ROA (58), 20m alt., Ana Kai Tangata 7.12.1993: 2♂♂; HANGA ROA (63), 100m alt., Ana te Pahu 5.12.1993: 1♂; HANGA ROA (64), 130m alt., Ahu Akivi 5.12.1993: 2♂♂; M.TEREVAKA (30), 130m alt. 16.12.1993: 10♂♂; M.TEREVAKA (31), 170m alt. 8.12.1993: 10♂♂ 1♀subad.; M.TEREVAKA (34), 210m alt. 16.12.1993: 3♂♂; M.TEREVAKA (35), 300m alt., N M. te Honga 9.12.1993: 1♂; Northern coast (47), 15m alt., W. ANAKENA 13.12.1993: 1♀ 2♂♂ 1juv.; Northern coast (49), 20m alt., Te Pito Kura 8.12.1993: 1♂; POIKE (2), 5m alt., HANGA NUI 18.12.1993: 2♂♂; POIKE (3), 5m alt., MOTU ARIKI 18.12.1993: 2♂♂; POIKE (5), 150m alt., Cap O'Higgins 14.12.1993: 7♂♂ 1♂subad.; POIKE (6), 170m alt., M. PAREHE 14.12.1993: 1♂; POIKE (7), 190m alt., Cap ROGGEVEEN 15.12.1993: 1♂; POIKE (9), 235m alt., Cap CUMMING 15.12.1993: 3♂♂; POIKE (10), 265m alt., M. VAI HAVA 10.12.1993: 2♂♂; POIKE (8), 200m alt. 2.12.1993: 1♂; RANO KAO (14), 35m alt., Ahu TAHIRA 16.12.1993: 2♂♂; R.KAO (18), 300m alt., VAI A TARE 6.12.1993: 3♂♂, 17.12.1993: 1♂; R.Raraku (29), 100m alt. 1.12.1993: 2♂♂; Southern coast (52), 5m alt., VAI-HU HANGA TEE 16.12.1993: 1♂; Southern coast (53), 10m alt., CAP EU 18.12.1993: 2♂♂ 1♀subad.; Southern coast (54), 15m alt., HANGA TUU HATA 14-18.12.1993: 1juv.; Southern coast (55), 40m alt., M. TE MIRO OONE 16.12.1993: 3♂♂ 1♀ 3juv. (Baert & Desender, 1993)

Nesticodes rufipes

HANGA ROA (61), 40m alt., Residencial Gomero 30.11.1993: 1♀, 7.12.1993: 1♀, 13.12.1993: 1♀. (Baert & Desender, 1993)

Parasteatoda acoreensis

M. TEREVAKA (12), edge of small waterbody 25.2.1976: 1♂ 1juv.; M. TEREVAKA (13), Rano Aroi 27.2.1976: 1♂; R. RARAKU (15), along crater lake 8.2.1976: 1♂. (Jacquemart, 1976)

M.TEREVAKA (36), 370m alt., 3-10.12.1993: 2juv.; M.TEREVAKA (37), 380m alt 3-10.12.1993: 1juv.; M.TEREVAKA (38), 425m alt., RANO AROI 3-10.12.1993: 1♂; M.TEREVAKA (41), 490m alt., top 3-10.12.1993: 1♀; R.KAO (21), 200m alt., crater 30.11-6.12.1993: 1♀; R.KAO (23), 125m alt., crater floor 30.11-6.12.1993: 1♀. (Baert & Desender, 1993)

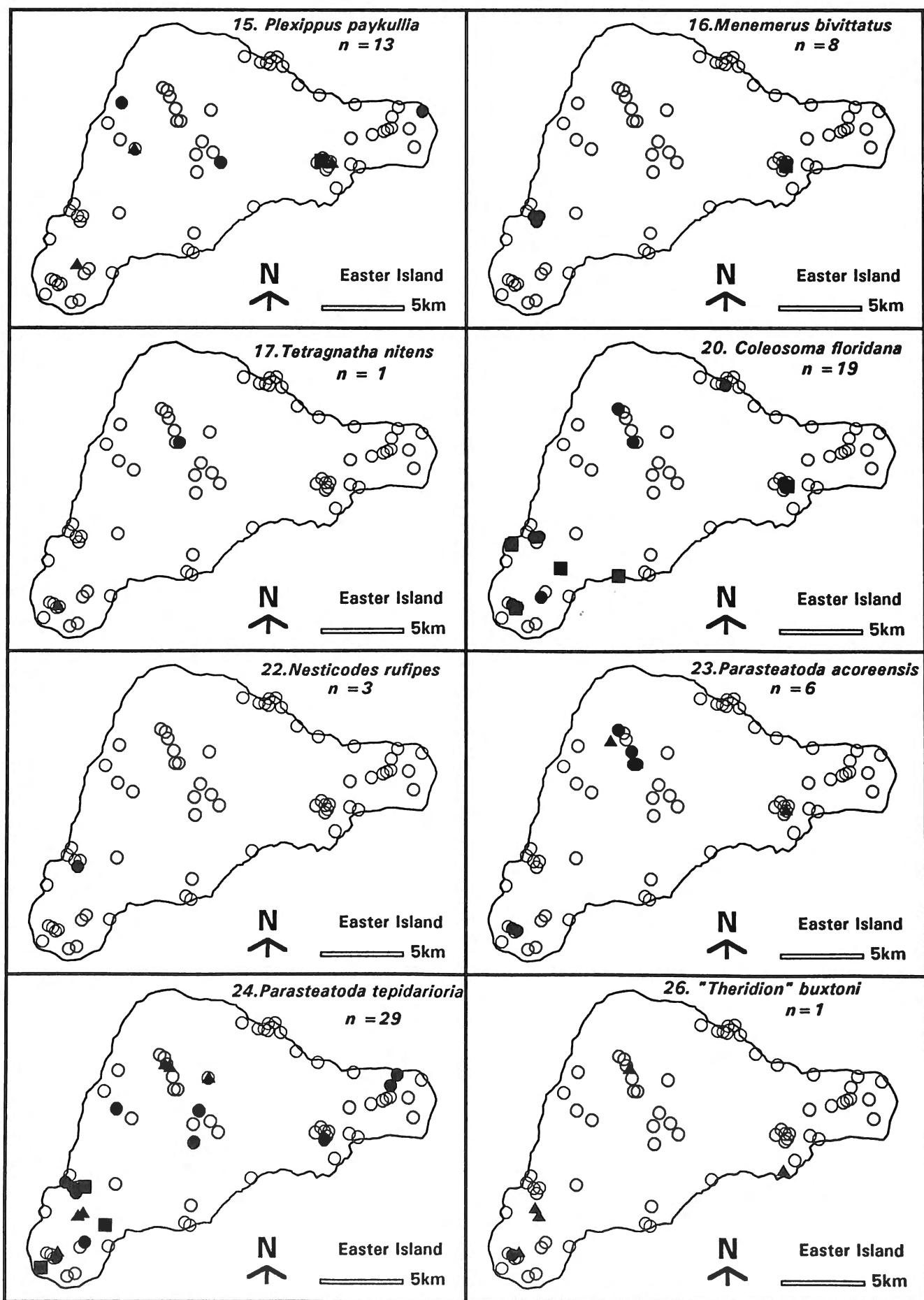
Parasteatoda tepidarioria

Surroundings of Vaitea, 10.12.1934: 1♂. (Mission Franco-Belge 1934/1935)

R. KAO (3), crater 12.2.1976: 1♂; HANGA ROA (5), Mataveri garden 27.2.1976: 1♀; M. TEREVAKA (13), Rano Aroi 27.2.1976: 3♂♂ 1juv. (Jacquemart, 1976)



Fig. 8. – Distribution of Araneae species on Easter Island; see legend Fig. 2 for further explanation.



Along road from Hanga Paukura towards Anakena, 14.11.1982: 2♀♂ 2♂♂; Along road from Ahu Akivi towards Orongo, 13-15.11.1982: 1♂. (Brignoli, 1982)

HANGA ROA (2), litter of secondary forest 7.5.1988: 2♂♂ 1juv., (3) in vegetation 7.5.1988: 3♀♀ 1♂ 34juv.; ORONGO (16), walls of a house 10.5.1988: 1♀ 8♂♂ 3juv. (Lehtinen, 1988)

M. TEREVAKA, encañada along eastern slope, 270m alt., 21.8.1990: 1♂. (Dumont, 1990)

HANGA ROA (56), 5m alt., Puerto , surroundings of small house 6.12.1993: 1♀; HANGA ROA (61), 40m alt., Residencial Gomero, garden 30.11.1993: 1♀, 7.12.1993: 1♀ 3♂ 3juv., 13.12.1993: 4♀♀, 21.12.1993: 2♂ 1♂subad.; HANGA ROA (59), 40m alt., Residencial Gomero, grassland 2.12.1993/ 1♂ 1Juv.; Hanga Roa (63), 100m alt., Ana te Pahu 5.12.1993: 1♀ 1♂subad., Maunga TEREVAKA, 175m alt., Eucalyptus-wood 9.12.1993: 1♂; M. TEREVAKA, 210m alt. 16.12.1993: 3♀♀ 2♂♂, POIKE (6), 170m alt., Maunga PAREHE 14.12.1993: 1♂ 2juv.; POIKE (10), 265m alt., Maunga VAI HAVEA 10.12.1993: 4♂ 5juv.; Rano KAO (15), 200m alt., Eucalyptus-wood 6-11.12.1993: 1♀; R. KAO (23), 125m alt., crater floor, edge of lake 6-11.12.1993: 1juv.; Rano Raraku (29), 100m alt., near and on the statues 1.12.1993: 3♂♂ 2juv. (Baert & Desender, 1993)

Stearodea grossa

HANGA ROA (5), Mataveri garden 27.2.1976: 1♀subad. 1juv.; HANGA ROA (6), Mataveri around houses 2.2.1976: 3juv.; M. TEREVAKA (10), a few km from Ahu Akivi 12.2.1976: 2♂♂ 2juv.; M. TEREVAKA (13), Rano Aroi 27.2.1976: 1♀ 9♂♂ 3♀subad. 3♂subad. 4juv. (Jacquemart, 1976)

Along road from Hanga Paukura towards Anakena, 14.11.1982: 3♂♂ 3juv.; Along road from Ahu Akivi towards Orongo, 13-15.11.1982: 3♂♂. (Brignoli, 1982)

HUA REVA (9), under stones in seahore 8.5.1988: 2juv.; ANAKENA Bay (5), under stones on thick grass 8.5.1988: 1juv.; HANGA ROA (1), stone bed on grassland 7.5.1988: 2juv.,

HANGA ROA (4), on ground in grass 7.5.1988: 1juv. (Lehtinen, 1988)

Haringa Vai Ohao, Eucalyptus-wood, 120m alt., 16.8.1990: 1♂ (Dumont, 1990)

HANGA ROA (62), 75m alt., Ahu te Pehu 5.12.1993:

1juv.; HANGA ROA (58), 20m alt., Ana Kai Tangata 7.12.1993: 1♂ 1♀subad. 1♂subad. 3juv.; HANGA ROA (61), 40m alt., Residencial Gomero 7.12.1993: 1♂; HANGA ROA (63), 100m alt.; Ana te Pahu 5.12.1993: 1♂; M. TEREVAKA (30), 130m alt. 16.12.1993: 2♂ 5juv.; M. TEREVAKA (31), 170m alt. 8.12.1993: 2♂♂; M. TEREVAKA (32), 175m alt., Eucalyptus-wood 9.12.1993: 1juv.; M. TEREVAKA (34), 210m alt. 16.12.1993: 2♂♂ 1♀subad. 1juv.; M. TEREVAKA (35), 300m alt., N M. te Honga 9.12.1993: 1juv.; M. TEREVAKA (39), 445m alt. 3-10.12.1993: 4♀♀, 20.12.1993: 1♀ 8♂♂ 1♀subad. 1♂subad.; POIKE (1), 0m alt., HANGA NUI 18.12.1993: 1♀subad.; POIKE (7), 190m alt., Cap ROGGEVEEN 15.12.1993: 1♀subad.; POIKE (10), 265m alt., M. VAI HAVEA 10.12.1993: 3♂ 1♀subad. 1♂subad. 5juv., 20.12.1993: 1♂; POIKE (12), 375m alt., crater floor 2-10.12.1993: 1juv., 20.12.1993: 6♂♂ 12subad., 10-20.12.1993: 1♂subad.; R.KAO (18), 300m alt., VAI A TARE 6.12.1993: 1♂; R.RARAKU (27), 70m alt., crater lake 1-8.12.1993: 1♀; Southern coast (51), 0m alt., VAIHU HANGA TEE 16.12.1993: 1juv.; Southern coast (52), 5m alt., VAIHU HANGA TEE 16.12.1993: 5juv.; Southern coast (53), 10m alt., CAP EU 18.12.1993: 2juv.; Southern coast (55), 40m alt., M. TE MIRO OONE 16.12.1993: 2juv. (Baert & Desender, 1993)

"*Theridion*" buxtoni

R. KAO (3), crater 12.2.1976: 1♀; HANGA ROA (5), Mataveri garden 27.2.1976: 1♂; HANGA ROA (6), Mataveri around houses 27.2.1976: 1♂; M. TEREVAKA (13) Rano Aroi 27.2.1976: 1♂; Southern coast (17), Ahu Onemaniki 26.2.1976: 3♂♂. (Jacquemart, 1976)

R. KAO (21), 200m alt., crater 6-11.12.1993: 1♀. (Baert & Desender, 1993)

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The 1993 mission to Easter Island benefited from the approval and cooperation of Dr. J. M. Ramirez Aliaga (Head of Province Isla de Pascua), J. Hey Paoa (Governor Province Isla de Pascua), Comte de Borchgrave d'Altena (Belgian Ambassador, Chile), Dr. Med. J.L. Gonzalez Reyes (Chilean Ambassador, Belgium), M. Claes & B. Lacrosse (National Department of Foreign Affairs, Belgium).

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We acknowledge the great help in the field of Marcelo Ika Paoa (Residencial Gomero).



Fig. 9. – Distribution of Araneae species on Easter Island; see legend Fig. 2 for further explanation.

Several spider taxonomists kindly accepted to identify or check species: Edwards G.B. (Florida State Collection of Arthropods, Gainesville, Florida, U.S.A.): *Phidippus* species; Galiano M. E. (Museo Argentino Ciencias naturais "B. Rivadavia", Buenos Aires, Argentina): Salticidae s.l.; Griswold Ch. E. (California Academy of Sciences, San Francisco, U.S.A.): *Habronattus* species; Platnick N. (American Museum of natural History, New York, U.S.A.): Gnaphosidae;

Professor H.J. Dumont, Dr. J. Mertens and Dr. D. Verschuren (Rijksuniversiteit Gent) made the spiders they collected during a short stay on Easter Island in 1990 available for study. Dr. L. Sorbini, Director of the Verona Natural History Museum, Verona, Italy, made the late Brignoli's spider material available to us for study. Mr. Aurel Van de Walle is acknowledged for technical assistance in the laboratory.

References

BAERT, L. & JOCQUE, R., 1993. A tentative analysis of the spider fauna of some tropical oceanic islands. *Memoirs of the Queensland Museum*, 33(2): 447-454.

BENTON, T.G. & LEHTINEN P.T., 1995. Biodiversity and origin

of the non-flying terrestrial arthropods of Henderson Island. *Biological Journal of the Linnean Society*, 56: 261-272.

BERLAND, L., 1924. Araignées de l'île de Pâques et des Iles Juan Fernandez. *The Natural History of Juan Fernandez and Easter Island*, 3(3): 419-437.

DESENDER, K. & BAERT, L., (1996). The Coleoptera of Easter Island. *Bulletin van het Koninklijk Belgisch Instituut voor Natuurwetenschappen, Entomologie*: 27-50.

GONZALEZ-FERRAN, O., 1987. Evolucion geológica de las Islas Chilenas en el Océano Pacífico. *Islas Océánicas Chilenas: Conocimiento Científico y Necesidades de Investigaciones* (J.C. Castilla Editor): 37-54.

LEHTINEN, P. T., 1996. Origin of the polynesian spiders. *Revue suisse de Zoologie*, vol. hors série II: 383-397.

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